

American Artisan

Founded 1888

The Warm Air Heating
and Sheet Metal Journal

Vol. 98, No. 16

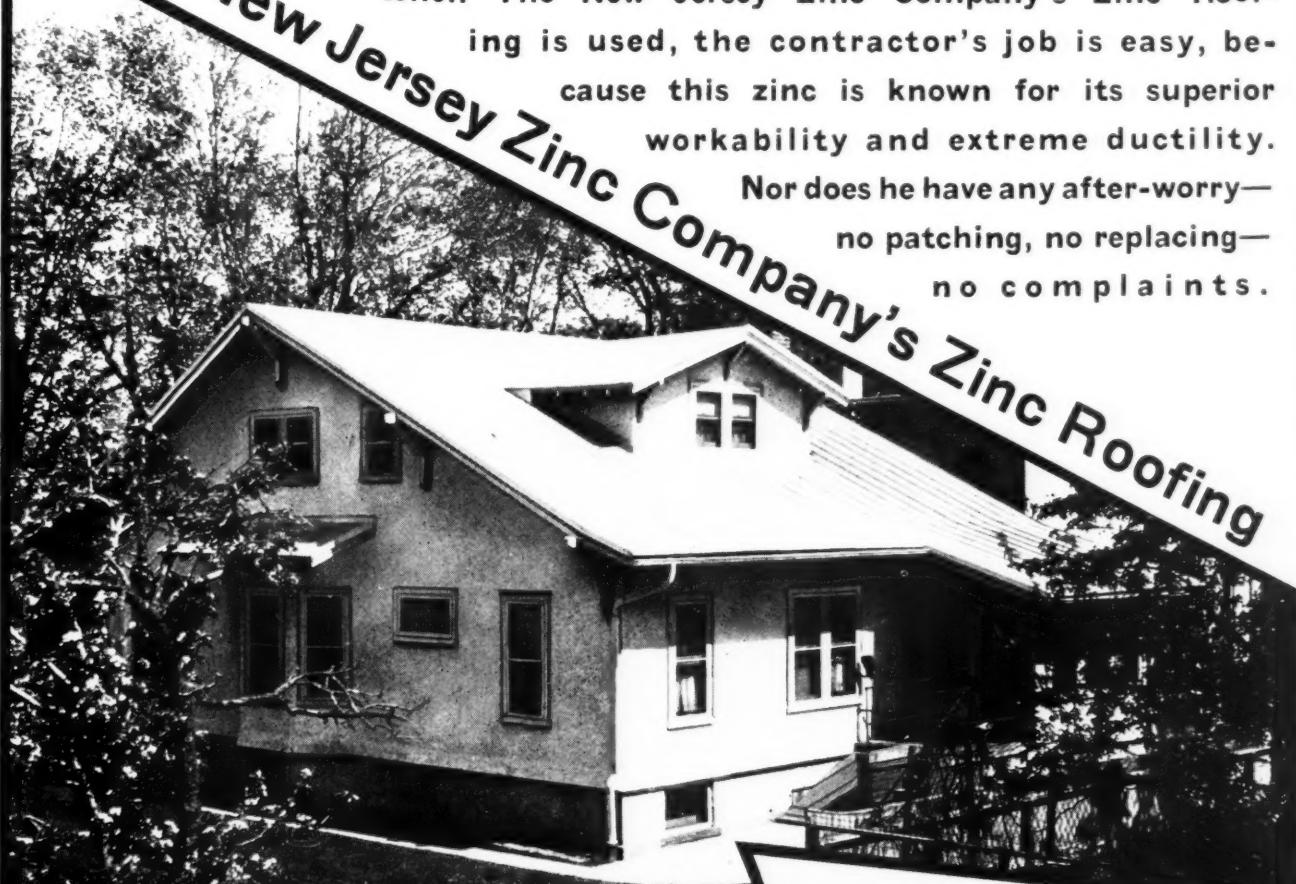
CHICAGO, OCTOBER 19, 1929

\$2.00 Per Year

HOMES with Zinc Roofs are quite commonplace in Europe, where they have been popular for a great many years... And the soundness of the practice appeals to the American house-owner when he hears of Zinc's permanence and low cost—with no periodical upkeep.

When The New Jersey Zinc Company's Zinc Roofing is used, the contractor's job is easy, because this zinc is known for its superior workability and extreme ductility.

Nor does he have any after-worry—
no patching, no replacing—
no complaints.



Please send me your booklet on "Standing Seam Zinc Roofing"

Name.....

Company.....

Address.....

The New Jersey Zinc Sales Company
160 Front Street



New York City



How much selling can you do with the register you handle?

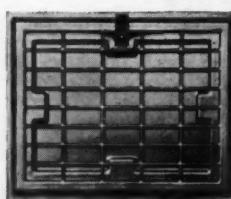
A FURNACE has this talking point, and that... efficiency, economy, cleanness. And your installation will be so and so . . . Much better than the usual job—if you can make the customer believe it.

And what of the *registers*? Can you claim some superiority for the particular type that you will install...or will they be just "registers"?

Registers are as important as any other part of your furnace job...And good registers offer their full share of effective selling arguments.

When you stop to think of it, registers are the very bottle's neck of a heating plant. The furnace and piping cannot be efficient if the registers offer resistance to the passage of the rising warm air. Nor can a good furnace continue to give clean heat if the floor registers trap dust and let it fall into the warm air ducts. You won't have to gloss over these facts if you

use LAMNECK Improved registers on every job. LAMNECKS will not "bottle up" heat in the ducts...they will not form dust traps in the floor. They are more efficient, cleaner, better looking and they make your job easier to sell. In spite of their greater value they don't cost you a cent more.



LAMNECK IMPROVED REGISTERS

If you are not already convinced that LAMNECKS are the cleanest, most efficient and best looking registers on the market, we want to send you a sample floor register. It will prove conclusively the superiority of LAMNECK registers. Use this coupon.

THE W. E. LAMNECK COMPANY
416-436 Dublin Ave., Columbus, Ohio

Gentlemen: I would like to see for myself why Lamneck registers are cleaner and more efficient. Please send me, without obligation, a sample floor register.

Name _____

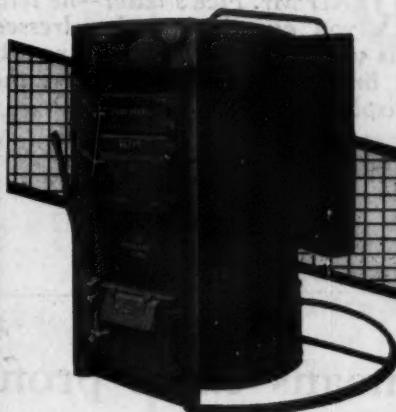
Address _____

City _____ State _____

3 GREAT PRODUCTS!

THE "CLEANER HEAT" SERIES
BY MIDLAND

TRUESTEEL

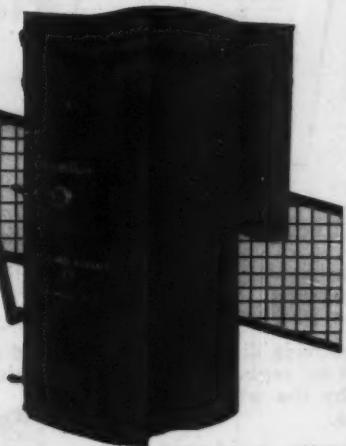


America's finest steel furnace

EL CAPITAN
MIDLAND MADE



America's most beautiful steel furnace



America's lowest priced quality steel furnace

Here they are!

Midland's three great products which give a dealer an unlimited scope. Every one interested in a furnace is your prospect. Midland entered this field with a knowledge of the dealer's problem and offers you, as a dealer, cooperation which makes selling easier. Investigate!

THE MIDLAND FURNACE CO.
COLUMBUS, OHIO

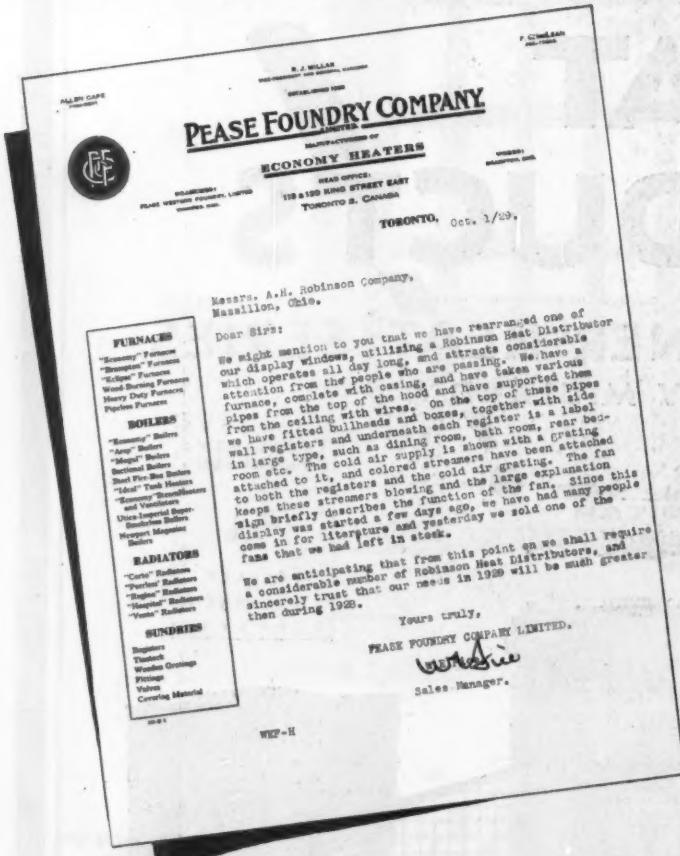
MIDLAND FURNACES

ALL STEEL •••



CLEANER HEAT

Window Display Sells



the
ROBINSON
Heat Distributor

READ Mr. Fice's letter—he tells you exactly how he dressed his window and relates the results it brought the first few days the display was in.

A similar display in your window means extra profits

IT'S just as easy for you to bring folks into your place of business. The Robinson Heat Distributor lends itself to effective display.

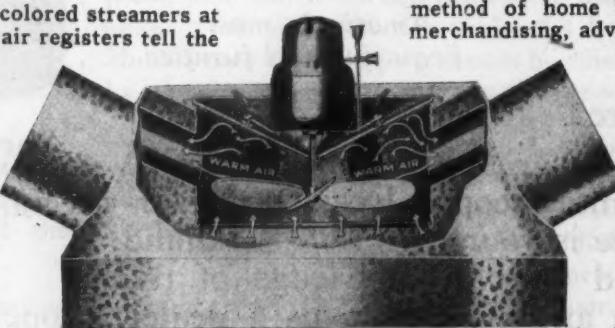
It is a moving display and the colored streamers at the cold air register and warm air registers tell the passersby the whole story at a glance.

What person could pass your window without stopping to look at a Robinson Heat Distributor display of this kind? And it is a safe bet that every man who has a warm air furnace in his home will be interested enough to come in for more information.

Not only will you sell more Robinson Heat Distributors

but more new warm air heating installations as well. This type of window trim creates more interest in warm air heating—it shows folks that it's the modern up-to-date

method of home heating. Today is the day of merchandising, advertising and selling. "You can't sell 'em if you don't tell 'em" is the battle cry of business today. The Robinson Heat Distributor will put more sales life into your business. It not only attracts attention but convinces by performance that it provides better, quicker and more economical heating. If you are a Robinson dealer put in this display now—if you are not a Robinson dealer write today to any Jobber listed below or to us for full details.



Mfg. by The A. H. ROBINSON CO., Massillon, Ohio

ROBINSON DEALERS THROUGHOUT THE COUNTRY SERVED BY THESE JOBBERS

BAKER-PAYNE-VOYE CO....Boston, Mass.
THE BECKWITH CO....Dowagiac, Mich.
BERGSTROM MFG. CO....Neenah, Wisconsin
CARE SUPPLY CO.....Chicago, Ill.
DAYTON-BESSLER CO....Syracuse, N. Y.
DEMMER BROS. CO....Pittsburgh, Pa.
DOWAGIAC STEEL FURNACE CO....Dowagiac, Mich.
FARRIS FURNACE CO....Springfield, Ill.
C. L. FEATHERSTONE FURNACE CO....Spokane, Wash.
FOLLANSBEE BROTHERS CO....Pittsburgh, Rochester, Cincinnati, Memphis, Detroit, Indianapolis, Milwaukee, Louisville.
FLORAL CITY HEATER CO....Monroe, Mich.
FOX FURNACE CO....Elyria, Ohio
HEATING & SUPPLY CO....Pittsburgh, Pa.
HENRY FURNACE & FOUNDRY CO....Cleveland, O.; Indianapolis, Ind.; Pittsburgh, Pa.

M. K. HOKE ESTATE....Manheim, Pa.
HOMER FURNACE CO....Coldwater, Mich.
IDEAL FURNACE CO....Detroit, Mich.
INTERNATIONAL HEATER CO....Utica, Chicago, Cleveland, Nashua, New Hampshire, Longbranch, N. J.
KALAMAZOO STOVE CO....Kalamazoo, Mich.
KELLEY-HOW-THOMSON CO....Duluth, Minn.
KELSEY HEATING CO....Syracuse, N. Y.
W. E. LAMNECK CO....Columbus, Ohio
LENNOX FURNACE CO., Inc., Syracuse, N.Y.
LENNOX FURNACE CO. OF CANADA, Ltd., Toronto, Ontario & Winnipeg, Man.
THE MAJESTIC CO....Huntington, Ind.
MAY-FIEBEGER CO., Newark, O.; Akron, O.
MIDLAND FURNACE CO., Columbus, Ohio
MONCRIEF FURNACE CO....Atlanta, Ga.
NEW IDEA FURNACES, LTD....Ingersoll, Ont., Can.

THE OHIO SHEET METAL & MFG. CO....Dayton, Ohio
J. M. & L. A. OSBORN CO....Cleveland, O.; Buffalo, N. Y.
PEASE FOUNDRY CO., Ltd....Toronto, Ontario, Canada
PENINSULAR STOVE CO....Detroit, Mich.
PORTLAND STOVE FOUNDRY CO....Portland, Maine
RICHARDSON & BOYNTON CO....New York, Chicago, Boston, Philadelphia, Buffalo, Minneapolis, Newark, N. J.
THE SCHILL BROS. CO....Crestline, O.
SUCCESS HEATER MFG. CO....Des Moines, Iowa
WESTERN STEEL PRODUCTS CO....Duluth, Minn.
GEO. F. WHEELOCK CO., Birm'g'h'm, Ala.
WISE FURNACE CO....Akron, Ohio

When writing mention AMERICAN ARTISAN—Thank you!

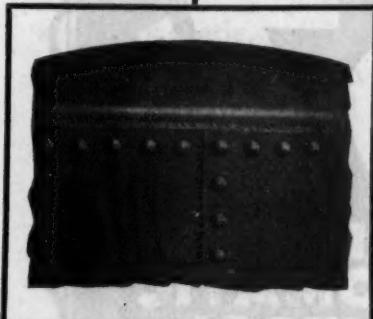


NEW! MODERN!

Here is a new product, developed by the largest makers of heating equipment in the world. In many features—in many new ideas in heating plant construction, it is entirely different from the older types of steel furnaces on the market before the year 1929.

The new Sunbeam Steel Furnace is better for burning oil! And better for burning coal. You will not realize . . . will not appreciate its numerous superiorities . . . or how much room for improvement Sunbeam engineers found, until you examine the new product.

Return the coupon for complete information.

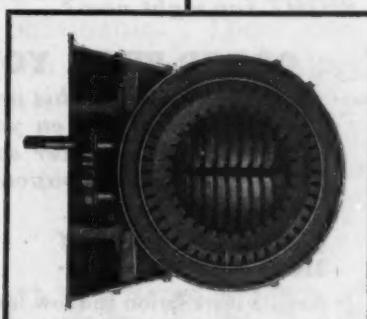


Riveted and Welded, Both—To insure fume-tight, leak-proof construction the Sunbeam Heating unit is both riveted and welded.

Sunbeam Innovations

1. Riveted and Welded, Both.
2. Full Height Fire Pot.
3. Seamless Ash Pit.
4. One - Piece Drum.
5. Duplex Grates.
6. Attractive Appearance.
7. No Joint between Drum and Air Chamber.

SUNBEAM
WARM-AIR FURNACES



Duplex Grates—An advanced type of furnace deserves an advanced type of grate—the duplex grate.

A Furnace for Every Requirement

THE FOX FURNACE CO.

ELYRIA, OHIO

A Division of the American Radiator and Standard Sanitary Corporation

Quality and Price, Both

The Fox Furnace Co.

Send complete information and prices on the new Sunbeam Steel Furnace.

NAME

ADDRESS

CITY

MAIL COUPON TODAY!

A-C MFG. CO., 417 Sherman St., Pontiac, Ill.

Gentlemen:

Please send complete details about the A-C Thermostatically Controlled AUTOMATIC HEAT BOOSTER.

Name

Street

Town..... State.....

JOBBER'S NAME

A-C Thermostatically Controlled Automatic HEAT BOOSTER

There will be a lot of good, profitable fan business in your neighborhood this winter—for the man with the RIGHT FAN at the RIGHT PRICE! The A-C AUTOMATIC HEAT BOOSTER is THAT fan.

Entirely Automatic — Silent — Trouble-Free and Fool-Proof— Guarantees Perfect Circulation

No other fan at anywhere near the price offers so much to the home owner—and the price is so far below that of any other fan offering its features that the home owner finds it easy to buy. The dealer who hasn't the A-C HEAT BOOSTER is going to find it tough bidding against the dealer who has. Why not get lined-up with the RIGHT fan right now?

ORDER FROM YOUR JOBBER

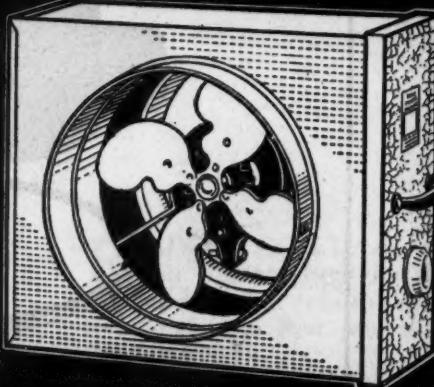
Get your share of this profitable new business—be ready when your customer asks for your bid. Order samples from your jobber or send coupon to us TODAY!

QUICKLY, EASILY INSTALLED . . .

Simple installation and low labor cost give you a definite price advantage. Fits into an easily constructed by-pass of any cold air return and is equally effective with any number of returns. DOES NOT INTERFERE WITH GRAVITY OPERATION—has no louvres, no back pressure. Shipped ready to install.

By Far, the Best Buy in the Field

Get Lined-Up NOW--!

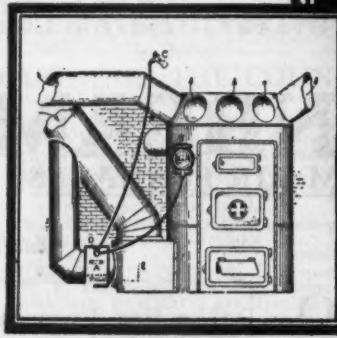


No. 9 Size Unit
with 10-in. Outlets, designed for average small home
— Mercury Control,
Heat Booster, Fan and
Unit with Emerson
Motor — All Ready to Install, Priced

**COMPLETE
To The Dealer**

\$ **37⁵⁰**

**INCLUDES
AUTOMATIC
CONTROL**

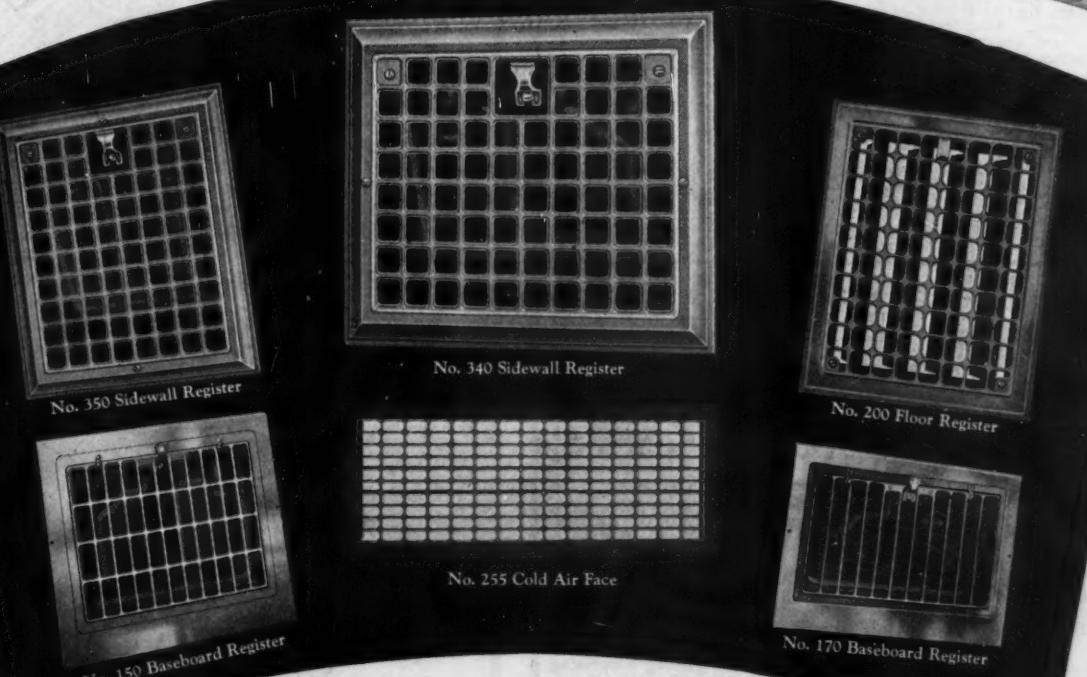


Larger Size Outfits for Large Homes, Churches, Schools, Halls, etc., at Proportionately Low Prices.

[Thermostatic Control Warm Air Furnace Fan Licensed Under Re. Pat. No. 15531.]

A-C Manufacturing Co.
417 Sherman St.—Pontiac, Ill.

THE LINE OF NO REGRETS



To be identified with
Success brings Success

Hart & Cooley's pre-eminence in the warm Air Register field is now taken for granted.

Pioneers in the manufacture of wrought steel registers, Hart & Cooley have always made it their purpose to produce the *finest* registers made.

H & C Registers have never been built down to a price, still they cost no more than others.

Such a policy has made for Hart & Cooley's success.

You can share in this success, for H & C Warm Air Registers and Cold air faces are the best obtainable. Their use in every installation insures the superior type of job which will help to build your business.



HART & COOLEY REGISTERS

Manufactured by HART & COOLEY MFG. CO.

CHICAGO
61 West Kinzie Street

Philadelphia, 1600 Arch Street
New York, 101 Park Avenue

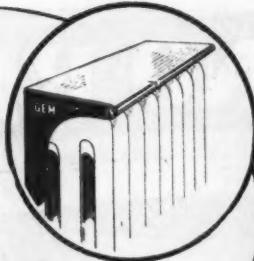
ALSO: A COMPLETE LINE OF CAST AND WROUGHT GRILLES—New Catalog Now Ready

NEW BRITAIN, CONN.
Corbin Avenue

Boston, 75 Portland Street
Nashua, New Hampshire

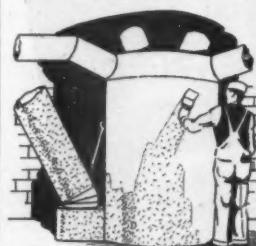
"GEM"
Adjustable
RADIATOR SHIELDS

Think of the convenience of any customer with any size radiators being able to select right out of your stock the right size and color of "GEM" Adjustable Radiator Shields to suit his requirements. The "GEM" Adjustable feature and assortment of five handsome colors make this possible.



Buy from your jobber

LIQUID ASBESTOS in WHITE or COLORS



BRAND new numbers in attractive fadeless colors in furnace covering, coating, and insulation. JUST WHAT YOU NEED to increase your sales. Each attractive installation sells another. Spreads with a brush. Easy to apply—no cutting and fitting—no paste. TAKES THE PLACE OF ASBESTOS PAPER on old or new furnaces. Apply over tin, galvanized iron, or paper covered surfaces.

MAKE THE INSTALLATION 100% SEAMLESS with LIQUID ASBESTOS, the tailor-made suit for every furnace.

OFFERS NEW SALES TALK

HELPS INCREASE SALES. A trial order is convincing. There are many reasons why every furnace dealer should know about LIQUID ASBESTOS. It's far superior to any other covering.

FIRE AND WATERPROOF
Dealers who are using LIQUID ASBESTOS are getting surprising results. Ask for our SPECIAL DEALERS' PRICES TODAY.
B. & F. MFG. CO., Dept. 7, Des Moines, Iowa

BACKED BY

Established 1902

Famous For Service



A Better Installation Is possible now with this new Self-Locking Double Stack

CHICAGO Pipe has been the choice of thousands of furnace men for over 26 years—now this improved pipe represents extra value—the result of experience and modern manufacturing methods. It clicks together quickly and easily—stays together and makes a stack of unequalled strength.

Ask about it now—write for our Catalog No. 21—
on Chicago Pipe and all Furnace Supplies

CHICAGO FURNACE SUPPLY CO.
1276-78-80-82 Clybourn Ave. CHICAGO

"American Seal"
FURNACE CEMENT

Roof Cement—Stove Putty
Plumbers Putty

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.

TROY

Established 1852

NEW YORK

JAMES L. PERKINS
Western Distributor
140 S. Dearborn St., Chicago, Ill.

The STANDARD CODE Computing Rule



Adapted from Article Three 5th Edition

of the **STANDARD CODE**

MARCH 1, 1928

Simple to Operate

THE Computing Rule is not a novelty, but, a well designed mathematical device, for figuring leader pipe and register areas for warm air heating systems. It has proven its accuracy in estimating and has passed the experimental stage. It is operated similar to an Engineer's slide rule.

The complete instructions are easily understood. You can learn to operate the Rule in less than one hour.

Results can be had without a single Division, Multiplication or Addition problem, as required in Article Three of the Standard Code. Not a chance for a mathematical error.

"Remember, you do not have to refer to a lot of loose parts or awkward tables."

Simplifies accurate estimating.

Handy Pocket Size

RULES are $5\frac{1}{2}$ inches in diameter— $\frac{1}{8}$ inch thick. Has an upper and lower revolving disc with a hairline indicating arm.

It is made of extra heavy and specially prepared celluloid, which reduces shrinkage and warping to a minimum. It is washable and unbreakable.

Can be carried comfortably in your pocket.

Here Is What The Computing Rule Will Determine:

- 1 The warm air pipe and register areas for First, Second and Third floor rooms.
- 2 The areas necessary for 700 inside temperature when the outside temperatures are ZERO, 10, 20 and 30 degrees ABOVE or BELOW zero.
- 3 The areas from the Contents, Glass, Wall, Roof and Ceiling. The factors as covered in Table "A" are represented in accurate form.
- 4 The areas for rooms having One, One and One-half and Two air changes per hour.
- 5 The Unusual Exposure requirements as the 10% for East and West and 15% for Northeast, North and Northwest rooms.

"Absolute Correct Results"

Price, \$3.00—Postpaid

AMERICAN ARTISAN

139 North Clark Street
CHICAGO, ILLINOIS

FLORENCE

A real HOT BLAST!

A trade winner and profit maker

A Florence Furnace has real sales clinching features that make the selling job easier. Guaranteed seven years. Patented Hot Blast feature which positively controls the fire by regulating the draft flow under and over the fire. Smoke, soot and gases are all consumed—nothing is wasted up the chimney.

The Florence delivers more heat with less and cheaper fuel. It changes the lowest grade coal to coke and produces fewer ashes.

The Florence is backed by an organization having sixty-eight years of manufacturing experience—one that stands squarely behind its dealers. Write us for full details of our proposition—it will not obligate you in the least.



Made in both Open Dome and Radiator Types

C. EMRICH CO. (Since 1861) COLUMBUS, O.

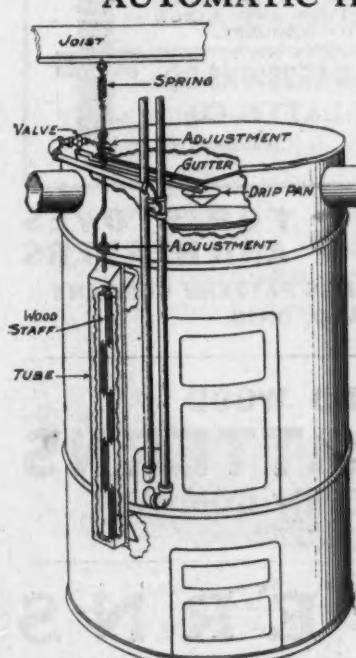
Manufacturers also of the famous Florence Hot Blast Heater, Supreme Florence Circulator, Florence Cook Stoves and Ranges

Give your customers perfect humidification with the—

PERFECT AUTOMATIC HUMIDIFIER

EXTREMELY SIMPLE...
UNUSUALLY PRACTICAL...

In use in hundreds of homes for over four years



HERE is the simplest and most practical automatic humidifier ever devised.

The dryness and humidity of the air regulate the water flow. When the air is dry the drip operates until required moisture is being supplied, then a positive action causes it to stop.

It can be regulated to keep the humidity at any desired degree. The valve closes automatically when fire is out.

Write today for full mechanical details on the Perfect Automatic Humidifier.

It sells easily because it is economical and practical. Dealers are making big profits with it.

The PERFECT HUMIDIFIER COMPANY
1605 CHEMICAL BUILDING
ST. LOUIS, MO



YOU CAN DO IT

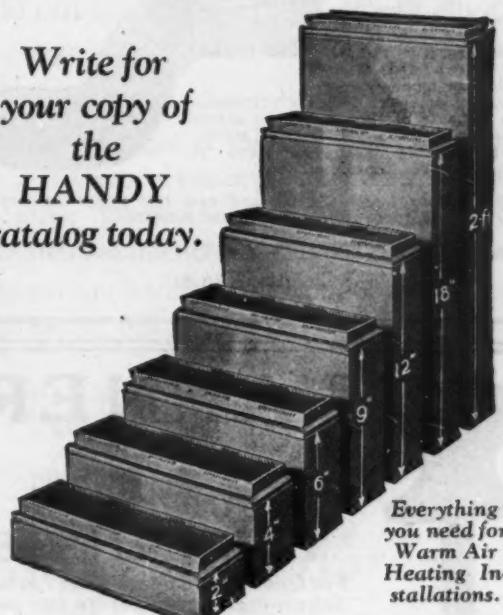
faster
better
easier

WITH

HANDY PIPE

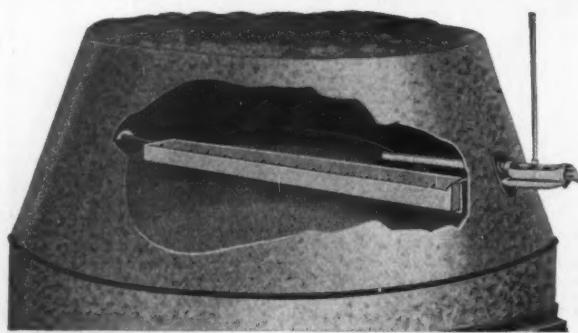
Try the pipe that thousands use exclusively—for better work and more profit.

Write for
your copy of
the
HANDY
catalog today.



Everything
you need for
Warm Air
Heating In-
stallations.

F. MEYER & BRO. CO.
PEORIA, ILLINOIS



"The Only Thermostatically Controlled Humidifier Made"

A Real Profit!

If you wish to make a real profit and at the same time do your customers a favor sell them health and Humidity. It is economical and profitable to you both to know about the Automatic Drip Humidifier, a standard article, and simplicity itself.

No furnace is complete without circulation and Humidity and to best get regular, constant, healthful Humidity use the Automatic Drip—heat controlled. Get our catalog and prices today.

Automatic Humidifier Company

Cedar Falls, Iowa

It - Is - The - Drip - That - Does - The - Formerly - Impossible

A FAN TO FORCE AIR THROUGH A SINGLE WARM AIR PIPE

Heats garages, sun porches and other rooms that will not heat by gravity. Mounts directly in the warm air pipe. Draws heat from the furnace and forces it into the hard-to-heat room.

Five reasons why you should use the American Heat Hustler:

1. It uses a positive pressure, rotary type fan.
2. Motor is outside the warm air flow, adding greatly to life of motor and leaving as much space for gravity air flow as before the Heat Hustler was installed.
3. It is quiet.
4. Furnished for either automatic or manual control.
5. Each model is very conservatively rated.

Price list, with descriptive literature showing different models, sizes, etc., will be sent you by return mail upon receipt of your request. Clip and send this ad in NOW!

AMERICAN FOUNDRY & FURNACE COMPANY

Bloomington

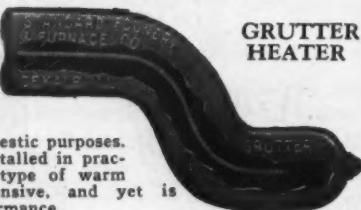


AA 8-31-29

Illinois

AUXILIARY WATER HEATERS For WARM AIR FURNACES

OUR Grutter Heater is just the unit needed for that furnace job where you must connect with a radiator or two and also furnish an ample supply of hot water for domestic purposes. This heater is easily installed in practically every standard type of warm air furnace, is inexpensive, and yet is very effective in performance.



Write for our latest Catalog and new low prices on Geyser, Grutter and Maltese Heaters.

STANDARD FOUNDRY & FURNACE COMPANY
DeKalb, Illinois

BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COPPER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

THE LAMSON & SESSIONS CO.

THE KIRK-LATTY CO.

1971 W. 85th St. Cleveland, O.

PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

IRON AND WOOD

STOVE PATTERNS

QUINCY PATTERN COMPANY

QUINCY, ILLINOIS

PATTERNS

FOR STOVES AND HEATERS

FIRST-CLASS
IN WOOD and IRON

VEDDER PATTERN WORKS ESTABLISHED 1855 TROY, N.Y.

FANNER STOVE AND FURNACE TRIMMINGS



For Quality and Service use Fanner Trimmings. We operate our own Malleable and Gray Iron Foundries.

Write today for latest illustrated catalog which lists and describes our complete line.

THE FANNER MFG. COMPANY
BROOKSIDE PARK CLEVELAND, OHIO

"The Anaconda Trade-mark helps us land many a contract"

*... says George F. Carragher,
of the National Metal Prod-
ucts Company, St. Louis*



Geo. F. Carragher, of the National Metal Products Co., who was recently elected a trustee of the National Sheet Metal Contractors' Association, is an Anaconda booster.



Interior view—National Metal Products plant, St. Louis, Mo.

HOW this well known sheet metal concern makes use of the Anaconda Trade-mark in selling Anaconda Sheet Copper, will doubtless be of interest to progressive sheet metal contractors. Says Mr. Carragher:—

"In talking to a customer about the advantages of copper sheet metal work, we frequently point to the Anaconda Trade-mark. We tell him this means that he is going to get quality material on the job. Quality workmanship, too—for that is our long suit as sheet metal contractors. Nine times in ten the customer gets the point and we get the contract. That's one reason why we are so keen about Anaconda Copper."

Anaconda Sheet Copper is manufactured with the highest metallurgical skill by the world's largest and most experienced producers of Copper, Brass and Bronze. Its uniform quality and easy workability are due to the scrupulous care given to every stage of manufacture from mine to finished product.

Stocks in the form of rolls, economy strips and clean, flat sheets of uniform gauge are maintained by leading distributors, assuring prompt deliveries to all sections of the United States. It will pay you to standardize on Anaconda Sheet Copper, a time-tested, guaranteed product.

THE AMERICAN BRASS COMPANY

General Offices: Waterbury, Conn.
Offices and Agencies located in all Principal Cities
Canadian Mill: ANACONDA AMERICAN BRASS LTD.
New Toronto, Ontario



Reptile House,
Forest Park Zoo, St. Louis, Mo. Anaconda Copper,
supplied by the Hammond Sheet Metal Co., was used for the exterior
sheet metal work. Installation by the National Metal Products Company.

Sheet Metal Work of ANACONDA COPPER



Look for the name ANACONDA in every sheet and strip. Leading Supply Houses carry it.

Founded 1880

American Artisan

The Warm Air Heating and Sheet Metal Journal

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A Combined Service for The Sheet Metal Shop

*Concentrate Purchases through this One Source
and Save Time and Money*

SPECIAL heated storerooms protect the quality and finish of the hundreds of tons of sheets carried at Ryerson plants, ready for Immediate Shipment to the sheet metal shops. Whether you need a bundle or a ton, plain galvanized or special rust resisting sheets, your order will have our personal attention and will be delivered at once.

In addition, bars, angles, channels, rivets, bolts, etc., are furnished from the general steel departments. Beaders, turning machines, snips and all the many sheet metal tools are supplied by our Small Tools and Machinery Division. Combined shipments often save considerable time and money.

Use this combined service—let Ryerson carry your stocks, subject to immediate delivery.

Partial List of Sheets Carried in Stock

Allegheny Metal
Ascoloy
Armco Ingot Iron
Armco Corrugated
Armco Enameling

Armco Galvanized
Black Steel
Blue Annealed
Corrugated
Deep Drawing

Deep Drawing
Electrical
Enameling
Galvanized
Terne Plate

Sign Sheets, Galvanized
Copper Bearing
Partition Steel
Patent Leveled
Single Pickled

Special "C" Pickled
Tool Steel
Uniform Blue
Vitreous Enameling
Wellsville Polished

WRITE FOR THE JOURNAL AND STOCK LIST—"KEY" TO IMMEDIATE STEEL

JOSEPH T. RYERSON & SON INC.

Plants: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Jersey City
Representation in: Minneapolis, Rockford, Kansas City, Tulsa, Newark, New York, Dallas, Denver, Los Angeles, San Francisco

RYERSON

STEEL - SERVICE

Mention AMERICAN ARTISAN in your reply—Thank you!

"I have chosen the WEIR for heating the finest homes in Czechoslovakia"



Says—Ferdinand Masnik, B. S. M. E.

Heating Engineer of
Moravska, Ostrava, Czechoslovakia, who came to the United States to make a study of warm air heating conditions and American made warm air furnaces.

EVEN in far off Czechoslovakia the progressive warm air heating men study the work that is being done by the National Warm Air Heating Association and the research staff of the University of Illinois.

Mr. Masnik has been reading the University Bulletins and American trade papers for some time. Being a graduate of Priban University of his native country, he became interested in the warm air heating work accomplished by the scientists at the University of Illinois, and during his visit to this country made a visit to the Research Residence.

Mr. Masnik is a keen student of merchandising as well as a first class heating engineer.

He read in the trade journals about the Weir motion picture "Happiness" which Weir dealers use to sell Better Warm

Air Heating and decided to see both the film and the Weir furnace during his stay in the States.

He is sold on the Standard Code and Steel Furnaces and he chose the Weir plant and organization for his practical course of study — spending six weeks seeing how the Weir is made and merchandised.

After a careful study of furnace construction Mr. Masnik decided on the Weir as the furnace for his homeland trade.

Mr. Masnik says:

"The Weir is scientifically designed, built for long life and I like its high quality and gas tight construction."

"The film 'Happiness' is just what I need to sell my people Better Warm Air Heating."

**THE MEYER FURNACE CO.
PEORIA-ILLINOIS**

The
Original
Steel Furnace
Now In Its
Forty-Eighth
Year

WEIR

Made by
The Founders
of the
Steel
Furnace
Industry



Vol. 98

CHICAGO, OCTOBER 19, 1929

No. 16

Home Modernizing

What the Movement Means to Sheet Metal and Furnace Industries

PROBABLY few sheet metal and warm air heating men fully appreciate the splendid opportunity that awaits them for materially increasing their business during the next twelve months as the result of the ambitious program which the Home Modernizing Bureau has laid out for the coming year.

According to the program, every branch of the building industry, even including manufacturers and dealers who supply home accessories of every kind, is exhibiting a lively interest in the development of home modernizing as a new outlet for merchandise. The idea is gaining ground rapidly and statistics reveal that the amount spent for modernizing during the last year was approximately half a billion dollars.

THE goal of the Home Modernizing Bureau of the National Building Industries, Incorporated, for the next twelve months is this: That \$2,000,000,000 be spent for remodeling, distributed thus:

Brick	\$ 80,000,000
Building Tile	6,000,000
Clay Products	10,000,000
Cement	100,000,000
Electric Utilities (and Appliances)	120,000,000
Financial	100,000,000
Floor Covering	20,000,000
Furniture	14,000,000

Gas (Utilities and Appliances)	120,000,000
Glass	20,000,000
Hardware	10,000,000
Heating	140,000,000
Insulation	50,000,000
Landscaping	10,000,000
Lumber	300,000,000
Metal Sash, Lath, etc.....	10,000,000
Millwork	150,000,000
Miscellaneous	140,000,000
Paint and Varnish.....	100,000,000
Plaster	30,000,000
Plumbing	200,000,000
Real Estate	40,000,000
Refrigeration	30,000,000
Roofing	66,000,000
Sand and Gravel.....	6,000,000
Sheet Metal	40,000,000
Stone	6,000,000
Terra Cotta	6,000,006
Tile	16,000,000
Wallboards	30,000,000
Wallpaper	30,000,000

HERE are outlined the contemplated modernizing activities for the ensuing year:

It is expected the American Farm Bureau Federation will affiliate with the Home Modernizing Bureau to encourage modernization on the farms. The farm bureau will provide the inspiration and suggest the practical means of attaining a higher standard of living through a comfortable, modern home on every farm in America.

The scope of the Home Modernizing Bureau news service will be

extended to newspapers throughout the United States, and there will be extensive radio broadcasting.

Contests are planned with modernizing as the theme.

Motion picture films on the subject of modernizing will be supplied, through the county farm bureaus of the American Farm Bureau Federation, for use at community meetings.

THERE will be arrangements for large groups of farmers to visit outstanding examples of modernized farm homes in their own communities.

Home modernizing clubs will be established in the 15,000 farm communities where organized farm bureau units already function, to promote interest and enthusiasm in modernizing. Field men will be sent promptly to communities that want to establish home modernizing bureaus.

ALL of which is in line with every dealer's own individual efforts to boost this new field of merchandising. Home modernizing undoubtedly is one of the most important subjects on the progressive building material dealers' docket for the future. Many dealers have accomplished considerable in this direction—others have not tried. But the matter is worth serious consideration.

How to Write Effective Sales Letters

ONE of the secrets of successful selling by mail that folks who use this type of selling have discovered is the greater potentiality of a series of short, pithy letters sent out at short intervals rather than one long letter in which the writer tries to cover too much ground.

One sheet metal and warm air heating contractor has successfully solved the problem of the sales letter by making use of illustrations somewhat exaggerated for emphasis.

THERE are many forms of advertising a business, but perhaps none so widely used as the sales letter. Practically every form of advertising has follow-up in the form of the sales letter. It is a most effective weapon not only for securing immediate business, but for building up both good-will and prestige.

The same fundamental principles that apply to successful salesmanship are likewise applicable to sales letters. In planning a letter or set of sales efforts in the form of letters, it is always well to keep in mind these four fundamental principles which may be classed as follows:

The letter must—

Attract attention.

Arouse interest.

Create desire.

Produce action.

Each one of these elements should follow in logical sequence. Just how are you going to make it do that?

The first thing the letter must do is attract attention. There are three good methods of doing this. First, by a statement of an interesting fact. Secondly, by asking a question. Third, by a strong statement or assertion.

The following is an example of the statement of fact opening:

"There is one right way of doing anything and a million wrong ways. There are two right ways of learning—one by experience and the other by learning from those who know."

Then there is the question method and examples of this is shown:

"Do you know that rust-resisting metal roof placed upon your home

will almost pay for itself in five years' time?"

"Do you know that you could save a fourth of your fuel bill this winter?"

Then comes the strong assertion opening:

"Don't blame your roof if your interior decorations are ruined by water leaking in—you are just as much at fault as it is."

"Your heating plant is wasting fuel that costs money."

A close study of all three of the above methods will show the first one to be the most business-like, because it starts the letter off well and leads the reader into the body matter where the arguments its suggests are presented. This is about the safest style of opening, but one must be sure to make a direct statement with sufficient force to command the attention desired.

The question method of opening has been greatly overworked and great care should be taken in using this form. Every effort should be made to arrange the question paragraph in such a way that the reader asks himself whether the point brought out applies to him. If it strikes the reader in this manner he invariably will want to know more.

The "strong assertion" type of opening is rather difficult to handle and will fall flat unless followed up

with sufficient evidence that will leave the reader in a receptive mood. On the other hand, there is probably no other form of opening that has more strength or force to make the reader pay quick attention to what you claim, than this method of opening.

A glance over the opening paragraphs illustrated in the three preceding examples will show much use of the words "you" and "your." There's a reason; in fact, this "you" element must never be lost sight of in planning a sales letter because any letter which is to act as a personal message must, from the very beginning, be addressed directly to the reader. Of course, one must use a reasonable amount of judgment in preparing the entire letter and it must be remembered that there are limits to the use of the "you" element, even though it be the most important element in sales letter.

Don't ever start a sales letter with any time-worn phrase, such as "You will be interested in knowing that we carry the largest stock, etc.,'" or "We desire to call your attention to our line of winter accessories representing thousands of dollars, etc."

Such statements are not of material interest to the reader. What he wants to know is what benefit he will derive from what you have to offer, rather than listen to you "blow your horn." Few men care to listen to another's story about his business, its earnings, its wonderful growth, etc., unless they ask for it. A better plan is to talk about your customer's problems, business, or home. This is why the "you" element is such an important part of the sales

message.

Study every paragraph of your letter. Forget for the moment that you wrote it, put yourself in the reader's place and try to see what effect your words have upon you as the reader of the letter. Get the other fellow's viewpoint and see whether it satisfies you.

You receive daily many sales letters offering all kinds of merchandise. Study these letters and try to see how those that arouse and hold your interest are constructed. Some of these letters are being written by the country's most successful writers, and by studying their methods you can obtain a good education in this line yourself.

When You Write a Letter Remember to—

1. Omit unnecessary introductory phrases.
2. State your thoughts clearly. Let your letter be both concise and forceful; that is, make every statement count for all you mean it to, without unnecessary words.
3. Paragraph your letter so that each thought will stand out forcibly; do not jumble them together, thus spoiling the letter's purpose.

4. Be courteous without overdoing it. Let the recipient of your letter feel your good intent and consideration toward him.

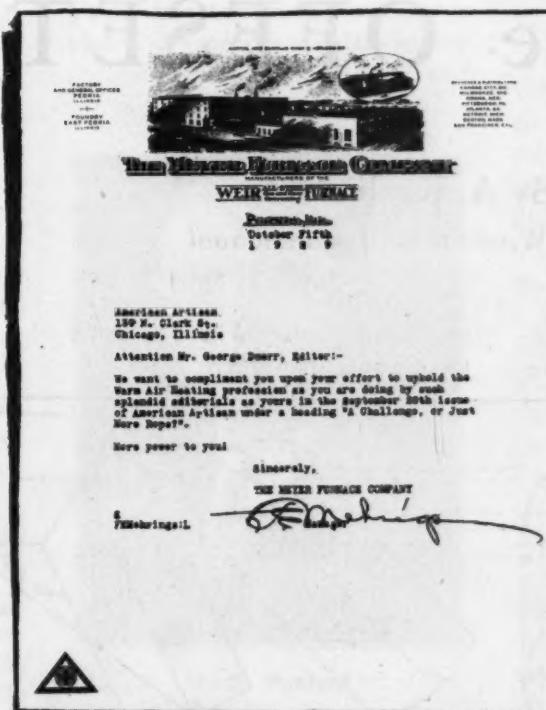
5. Make the ending of your letter mean something—that is, don't use the stock ending.

If we will always keep in mind the personal element and realize that our reader is more interested in himself, his needs and his desires than in the things we sell, we are going to write our letter accordingly and get a ready listener.

Have your sales letters pass through the four stages of attention, Interest, Desire and Action. Write your introductory chapter from the angle of the reader and thus command attention and interest because of that fact. Always convince first, then persuade!

Gary District Meeting To Be Held in Hammond October 25

The district meeting of the Gary District, Sheet Metal & Warm Air Heating Contractors' Association of Indiana, is scheduled for Friday, October 25th, and will be in the form of a dinner at 6:30 p. m. at Vogel's Fish House in Hammond.



Thank you! Mr. Mehrings

Particular attention is called to the fact that this is at Hammond and not at Gary. The fact that it is in the Gary district may cause some to remember the name Gary as the location, when as a matter of fact the meeting will take place at Vogel's Fish House in Hammond, Hammond being a part of the Gary district. Notify Mr. Gatz if you intend to go.

Chas. L. Gatz, 804 Washington Street, Gary, is District Governor, taking the place of Charles Hackenberger, and is in charge of arrangements. He is assisted by Walter Grote, 629 Washington Street, Gary, and Thos. J. Lavery of Burke Bros., Gary, who are president and secretary, respectively, of the local association. Everyone conversant with sheet metal affairs in Indiana knows that the local association, taking in the Calumet district, is a

very active and aggressive outfit, and it is certain that they will put this meeting over with a bang.

There is a board meeting called of the directors of the state organization for this time, and this, along with invitations issued to interested contractors, will bring in delegates from other parts of Indiana. Also manufacturers, salesmen and jobbers from Chicago who are acquainted with the trade in this district will take advantage of this opportunity to meet them socially.

This meeting, following the precedent set by former district meetings, will be open to all elements of the sheet metal and warm air heating trade, including contractors, both members and non-members, jobbers, manufacturers and salesmen. The dinner has been set for 6:30, so that contractors can attend without much loss of time from their business, and all contractors within driving distance of Hammond are urged to do themselves a favor by being on hand. Salesmen are requested to arrange their itinerary so as to land in Hammond with both feet

prior to 6:30 on October 25th. They, as well as manufacturers, jobbers and other elements of the sheet metal trade will be welcome at this meeting.

Mercoid Controls Has New Catalog for Oil Burner Controls

Mercoid Controls for Heating Equipment is the title of a new catalog (No. H 5) issued by the Mercoid Corp., 564 West Adams Street, Chicago.

Included in the products presented are Mercoid thermostats, pressure controls, immersion-type controls, Risetherms, pyratherms, ignition controls, and the Mercoid Interlock for the automatic control of oil burners.

Six wiring diagrams show typical Mercoid wiring connections for oil-burner installations.

Constructing a 3-Piece OFFSET

By A. Kealer
Instructor Washburne Trade School

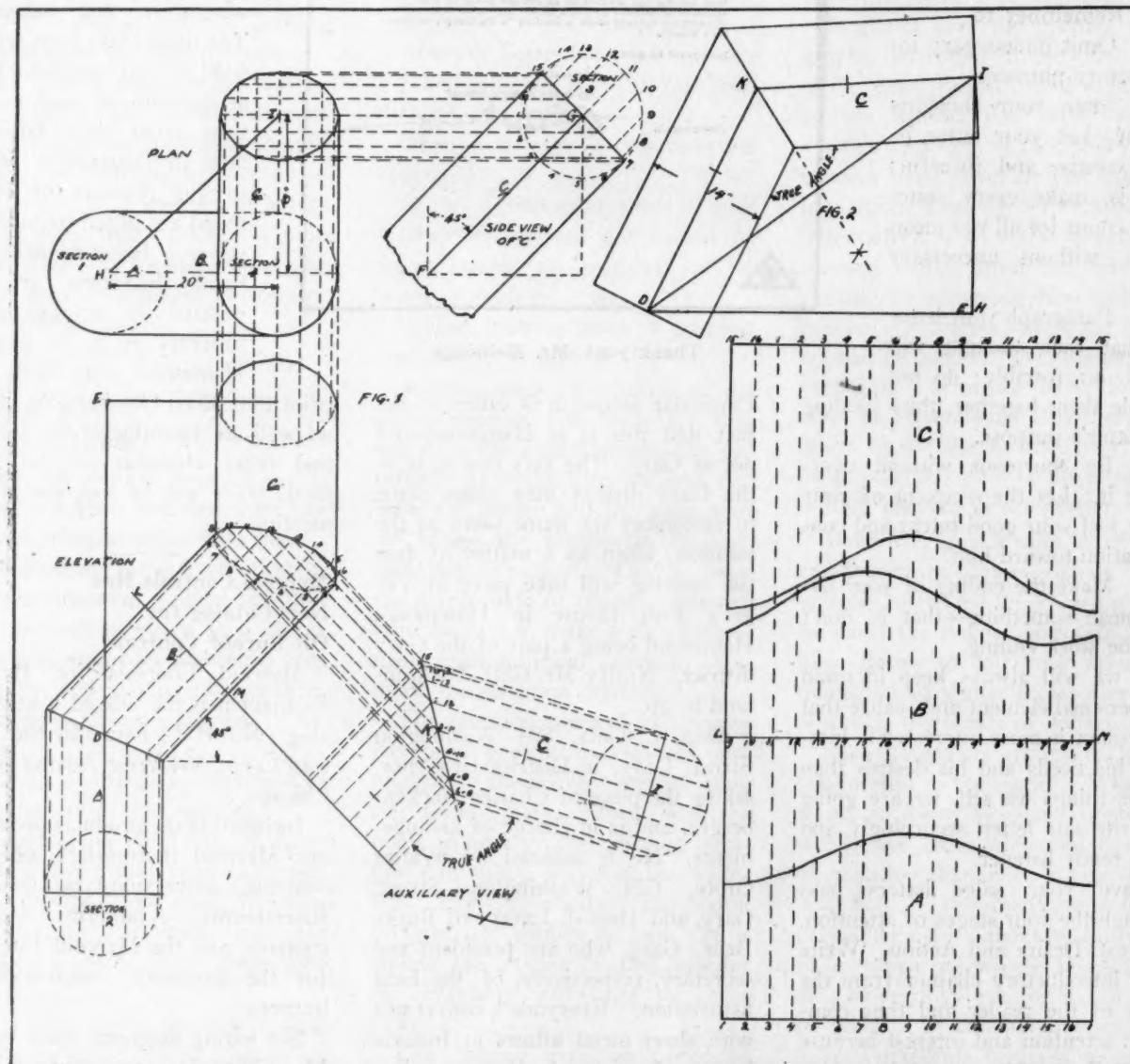


A. Kealer
Associate Editor

IN REPLY to one of your subscribers for a pattern of a three-

piece twisted offset, I have prepared
the drawing shown here.

First draw the plan to the given dimensions. In this case piece C of



This Sketch Is in Reply to the Inquiry of E. W. Robinson, Brighton, New Jersey

the offset turns around a corner at an angle of 90° and rises at an angle of 45° .

Next project all points from the plan into the elevation and set the middle piece B to an angle of 45° , as shown.

Now draw the side view for piece C at an angle of 45° with the vertical. Draw sections 2, 3 and 4 as shown and divide them into 16 equal parts. Project the division points from section 2 into the elevation of pieces A and B. Likewise project the division points in section 3 to line 15-7 and then horizontally toward the plan. Project the division points from section 4 vertically until they intersect similar numbers carried over from section 3 and complete the plan view of piece C.

To find the true angle between B and C, form a right angle triangle with the distances D-E from the elevation as a base and H-I from the plan as the altitude, as shown by D-E-H-I in Figure 2. Then use the lengths of the center lines of pieces B and C, as D to J and F to G, from D and I in Figure 2 as centers, and strike two arcs intersecting each other at K. I-K-D is then the true angle between B and C.

Since the piece C is at an angle of 45° with the vertical, it will make an eighth of a turn with piece B. The auxiliary view shows where the numbers of the division points have been shifted 2 divisions to make the one-eighth twist.

Care should be taken to follow the numbers as they are projected from the auxiliary view into the elevation and from the elevation and the auxiliary view to the pattern. Note the measuring line L-M on piece B of elevation, which is used to make the change of numbering the lines on the pattern for the miter cuts at both ends of piece B.

M. E. Danford Appointed Assistant V. P. of American Rolling Mill

Dear Miss Cohn:

M. E. Danford, for seven years works manager of the Middletown division of the American Rolling

Mill Company, has been appointed assistant vice president of that company, according to an announcement issued October 4th by Charles R. Hook, vice president and general manager.

Mr. Danford began his business career with Armco February 1, 1910, when he came to Middletown as superintendent of the open hearth department of the central works plant. In that capacity he helped to plan and supervise the building of the open hearth furnaces at the east works plant.



M. E. Danford

In July, 1911, when the new plant at east works was ready for operation, Mr. Danford was made assistant to Charles R. Hook, then general superintendent of the American Rolling Mill Co. In July, 1916, when Mr. Hook was made vice president and general manager, Mr. Danford was made general superintendent of the Middletown division. He was appointed works manager of that division in 1921 which includes the Zanesville plant as well as those of the company in Middletown.

Mr. Danford is a member of the Iron and Steel Institute and well known in the steel industry.

THE FURNIS BIZNES

by a Arkansas Koon hunter

I sold a nother furnis and bot me a puddle jumper. Ef i sel a furnis evry munth i can pay fur the kar. I got a dun fur the car furnises but i dont no ef they heet good ontill

Kold wether gits here and that is when Koons is ripe. I am Kamly watin fur frost.

Bill Bestever.

A CORRECTION

A mis-statement was inadvertently made in the text matter of the A. H. Robinson Company, Massillon, Ohio, advertisement which appeared on the front cover of our September 28th issue.

The second paragraph in the advertisement began, "It is the first and only gas warm air furnace on the market that is equipped with a fan which starts and stops automatically . . ." It was the intention of the advertiser to include the words, "in the furnace bonnet."

So that the statement should have read, "It is the first and only gas warm air furnace on the market that is equipped with a fan in the furnace bonnet which starts and stops automatically with the gas supply when the room temperature calls for more heat . . ."

We hope this correction will avoid any misinterpretation being placed upon the advertisement, as the advertiser is equally as anxious as we are to avoid creating any wrong impression.

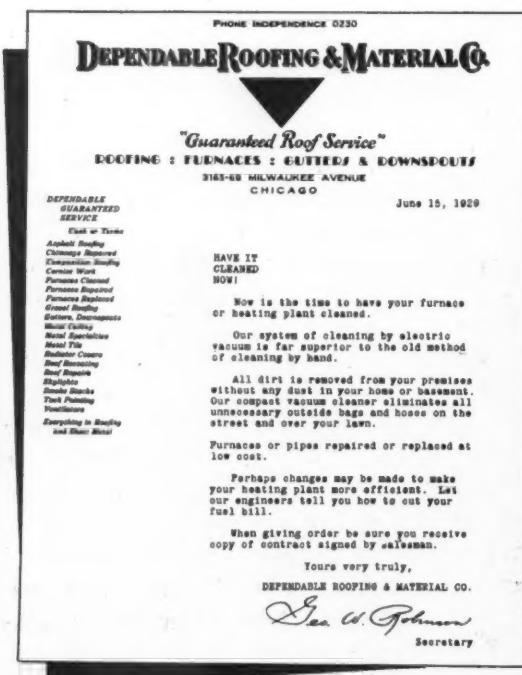
Frank A. Weidman to Manage Wrought Division, Sharon Steel

The Sharon Steel Hoop Company announce that Frank A. Weidman has been appointed manager wrought iron division to handle the development and distribution of wrought iron sheets.

Mr. Weidman was, until recently, special representative for the Inland Steel Company, Chicago. Previous to that he was with the American Sheet & Tin Plate Company at Pittsburgh.

The company also states that the perfection of the Aston process for making wrought iron, which for the first time in the history of this material permits it to be produced on a tonnage basis, again makes wrought iron available for sheets, after having been practically unobtainable for two decades or more.

Selling Sheet Metal and Warm Air Heating Service with

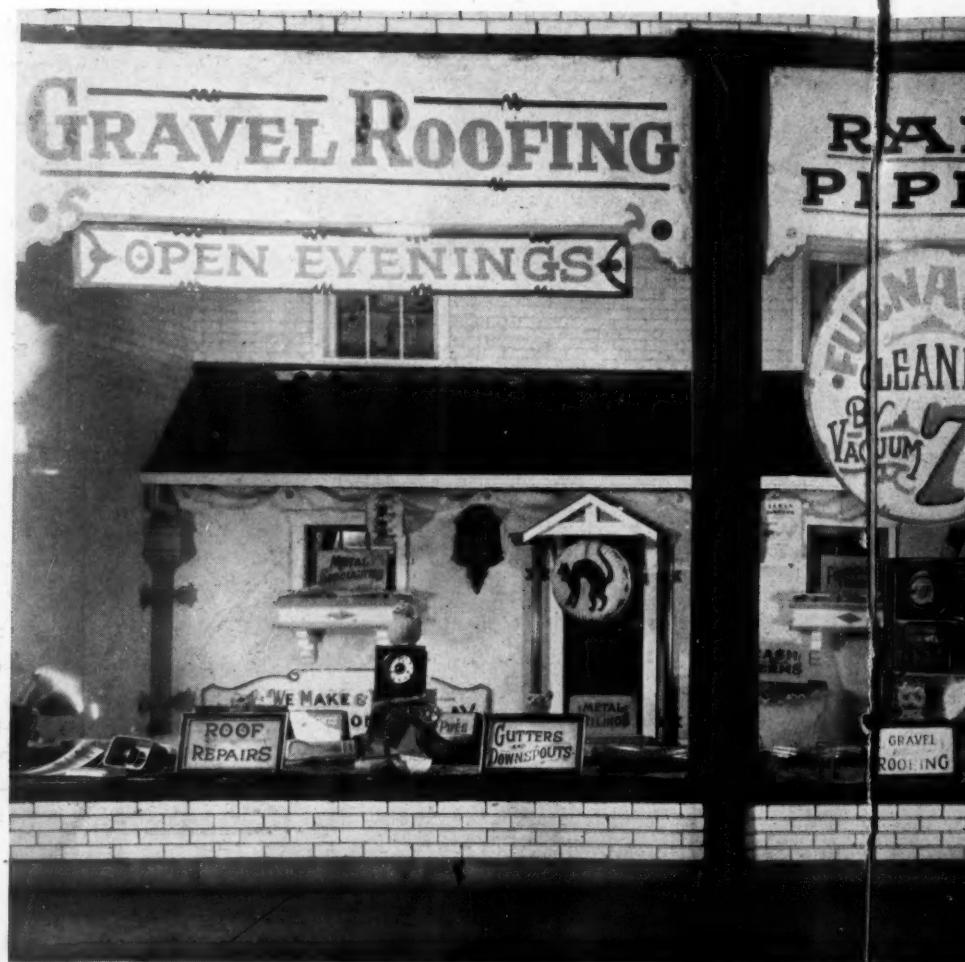


This letter was sent to a list of customers of the company and it produced a good volume of business for the company.

WHAT is the secret of successful selling of sheet metal, roofing and warm air heating? George W. Robinson, General Manager of the Dependable Roofing & Material Company, 3165 Milwaukee Avenue, Chicago, judging from the good results he gets, must have a pretty accurate answer to that question. Briefly, here is his way of putting it: "Those engaged in selling must have:

1. A thorough knowledge of the product and the service it can be to the home owner.
2. A definite idea of what they are endeavoring to do.
3. Genuine enthusiasm for what they are doing.

Window Displays



4. Courage and faith enough in the venture to equip themselves properly.

5. Intelligently constructed window displays that stimulate curiosity and interest.

6. Intensive direct-by-mail and personal solicitation campaigns.

7. A whole-hearted desire and endeavored to keep customers satisfied at all times.

"There's no use denying it," said Mr. Robinson, "you've got to keep your name before the public at all times, and there is no better way of doing this than through the medium of advertising. Of course, advertising must be intelligently done. There are

some types of advertising that have little or no value and to indulge in them is largely a waste of time, effort and money.

"The methods of advertising we have found most productive are the window display, the blotter, the city 'phone directory, the house-to-house canvass, and the direct-by-mail suggestion; this latter timed to accom-

HERE ARE SIX SIMPLE RULES MR. ROBINSON OB DISPLAYS

1. The impression made by a window display must be convincing, question, doubts, debate, or disbelief in the mind of the observer.
2. Avoid anything in the display that distracts or startles the window.
3. Make your display idea or message easy to grasp.
4. See that your window display delivers its full message.
5. Plan your displays to emphasize the prospect's advantage—than to negative.
6. Have the window suggest a definite, single course of action or information on our work or the service the products displayed can

Views and Sales Letters



GEORGE W. ROBINSON, of the Dependable Roofing & Material Co., says that an intelligent use must be made of all types of sales effort—each in their proper time and co-ordinated.

plish a certain definite object and sent to a carefully selected list of home owners.

"The house-to-house canvass, where you get the personal contact between our representatives and the home owner, is, in my opinion, the best possible kind of business getter. We work this method hard, not only employing a corps of house-to-house

solicitors on full time, but many on a part time basis as well.

"Here is a letter that we used and which produced excellent results for us in the way of getting furnace cleaning and repair work during the dull months. You see, we keep a complete list of the customers that we have served in the past—not only those we served last year, but two, three or even five years back. This list is checked against the telephone directory, and the names on our list which do not appear in the directory are, of course, taken out.

"The letter that is reproduced was sent out to 7,500 of the names appearing on our old customer list and produced, as I said before, excellent

business for us. The blotters which our house-to-house canvassers pass out during their calls, and which we also mail out, are designed to keep our name before the people who are most likely to need our services.

"But to get back to our window displays. We believe in the power of windows to attract attention. Of course, we haven't the best possible arrangement here for window display work, as we do not own this building, but we exert a continuous effort to make the most of our opportunity.

"The window that you see there now (also reproduced herewith) cost us considerable money to construct, but we have had convincing evidence that this type of advertising is high in pulling power. We make a constant effort to change the arrangement of these windows and

ROBINSON OBSERVES IN MAKING HIS WINDOW DISPLAYS

must be convincing—that is, it must be such as to avoid arousing the observer.

or distracts the observer's attention from the message in the

grasp.

full ses message.

ect's atantage—that is, make your appeal to positive rather

the cor of action, which naturally is that of seeking more
erts displayed can render the home owners.

to keep them clean. At night they are lighted with colored lamps and they surely do attract attention. We have a little stunt in this connection. We advertise that everything shown in the window is made in our own shops. This doesn't mean that we make all these things but that we can make them. The house shown is covered with a metal tile roof, copper gutters and down spouts. The flower boxes shown are of metal, as are the ornaments near the upper portion of the structure. Of course the company handles all types of roofing, hence all types are on display. Warm air given considerable prominence in this display. There are many excellent ideas on how to construct a good window display in this illustration from which the sheet metal man can profit.

In regard to general business conditions Mr. Robinson said that he looks for a steady increase in the furnace business, which will continue to develop until the gas industry and the gas companies are able to bring the price of gas for heating down to a more reasonable figure. Then there will be a rapid switch to that type of heating unit. There's something for the progressive furnace man to think about.

"The big trouble with the sheet metal contractor and warm air furnace installer today is that he deludes himself that he has no overhead, which, of course, is as preposterous as anything could be, but nevertheless he is influenced to lower his prices thereby. There is no man in business, regardless of how small that business may be, who does not have overhead. As a matter of fact, in proportion to the amount of business done, the overhead per unit of business of the small firm will al-

ways be larger than that of the bigger firm. It cannot be otherwise, because of the unavoidable lost motion coincident with the conduct of a small business.

Business Survey Reveals Good Conditions

Industry throughout the country at the present moment is just a

per cent fair and 6 per cent poor. Prospects for the winter are regarded as excellent by 12 per cent, good by 54 per cent, fair by 30 per cent and poor by 4 per cent, while last year 14 per cent reported excellent, 43 per cent good, 36 per cent fair and 6 per cent poor.

Comparing the business done up to this fall with the same period last year, 53 per cent report better returns, 17 per cent less, and 30 per cent find no change. A year ago the report was 50 per cent better, 25 cent less and 25 percent no change.

There is no time like the present to advertise your business. Folks may not be buying

your services now, but sooner or later they will be compelled to and then he whose name is before them will get the business.

Why It Doesn't Pay To Go It Alone In These Days

Over one hundred years ago, Napoleon Bonaparte refused to see Robert Fulton, the inventor of the steamboat, while his enormous army, with which he hoped to invade England, lay idle on the nether shore of the English channel awaiting favorable winds to carry his vessels to England and victory. "I am busy. Why bother me now with your schemes and inventions," and he paced up and down trying to solve his problem ALONE. Months of waiting, and no solution, yet it lay within his grasp.

Fulton had solved the problem that drives great vessels even against wind and tide. The men on the Hudson listened and won. Napoleon, alone, lost.

The solution of your problems in your shop is known to some man in the Association.



Blotter Used by G. W. Robinson With Good Effect

shade more favorably situated than it was a year ago, but numerous individual industries show recessions from their position last year, according to the annual trade survey of the National Association of Manufacturers, presented at the annual meeting in New York this week by J. Lewis Benton, general secretary of the organization.

A questionnaire, covering present trade, prospects for winter, comparison with last fall, production, sales quantities and values, employment, wages and labor conditions, was sent to 3,000 members of the association the first of this month, with request that the report be made as of October 4. The tabulation was closed October 7, at which time nearly 1,000 replies had been received. The survey covers a compilation of something more than 9,000 detailed answers.

Taking the industries as a whole, of the companies reporting 19 per cent class their present business as excellent, 45 per cent good, 31 per cent fair, and 5 per cent poor. Last year they were classified, 17 per cent excellent, 41 per cent good, 34

WHO'S WHO, WHERE!

SAN FRANCISCO, CAL.—The Holbrook Manufacturing Company has engaged in the sheet metal business on the corner of Sixth and Bluxome Streets.

ABERDEEN, WASH.—The Pryde Bros. Sheet Metal Works has succeeded to the business of H. J. Pryde.

CHEHALIS, WASH.—The death is reported of Herman J. Shom, proprietor of the sheet metal works.

PIPESTONE, MINN.—Larson Brothers, engaged in the sheet metal, heating and contracting business, have moved their business headquarters to Yankton, S. D., where they have established themselves at 320 Douglas Avenue.

OSHKOSH, WIS.—The Warning Sheet Metal Company has the sheet metal contract for Hardware Dealers Mutual Fire Insurance Company building in Stevens Point, Wis.

ST. PAUL, MINN.—The Ray Roofing Company, 293 Snelling Avenue, North, has been awarded the roofing and sheet metal work on school building in Anoka, Minn.

NORTHFIELD, MINN.—The Northfield Furnace Company has the heating contract for residence of George Machacek.

WATERLOO, IA.—The Waterloo Metal & Manufacturing Company, corner Commercial and Miles Streets, has been awarded the sheet metal contract for store building of Frank Collard, Jr., Inc.

CEDAR RAPIDS, IA.—Ilten & Taege, 325 Fourth Avenue, West, has the warm air heating contract for residence of George W. Hearn.

DAVENPORT, IA.—R. Claussen, 617 West Second Street, has been awarded the hot air heating contract for residence of J. H. Fellner.

WATERLOO, IA.—The Waterloo Metal & Manufacturing Company, corner Miles and Commercial Streets, has the sheet metal work contract for six-unit apartment row of Louis A. Gaiser.

CEDAR RAPIDS, IA.—The business establishment of the Grissell Cornice Company has been damaged by fire.

SAN FRANCISCO, CAL.—The J. W. Bender Roofing Company, 18th and Bryant Streets, has the roofing and sheet metal contract for warehouse of American Can Company.

REDWOOD CITY, CAL.—The Alex Sheet Metal Works has the sheet metal contract for residence of New Gymphona Club in San Mateo, Cal.

OAKLAND, CAL.—Edgar Anderson, 3103 San Pablo Avenue, has been awarded the sheet metal work for school building in Livermore, Cal.

LOS ANGELES, CAL.—The National Cornice Works has been awarded the sheet metal contract for store and loft building of C. L. Peck Company, Inc.

PASADENA, CAL.—The Wilson Sheet Metal Company has the sheet metal contract for non-commissioned officers' quarters, March Field.

ATLANTA, GA.—The Applewhite & Lawler Company, Citizen's & Southern Building, has been awarded the roofing and sheet metal contract for \$650,000 U. S. Veterans Hospital.

ST. LOUIS, MO.—Huber & Richardson, 3740 St. Louis Avenue, have been awarded the sheet metal contract for new

buildings being erected at U. S. Veterans Hospital, Jefferson Barracks.

SHREVEPORT, LA.—The Rankin Sheet Metal Works, 1953 Samuel Street, has been awarded the roofing contract for \$600,000 Ward Hotel in Fort Smith, Ark.

The Mount Rose Cornice & Sheet Metal Company has been awarded the sheet metal contract for Grand Avenue M. E. Church,

ABERDEEN, WASH.—H. J. Pryde has sold his interest in the Pryde Brothers Sheet Metal Works.

PORTLAND, ORE.—William A. Hughes and Ben F. Super have engaged in business under the name of Western Sheet Metal Works.

SAN FRANCISCO, CAL.—The Pacific Sheet Metal Company, 305 Valencia Street, has been awarded the sheet metal contract for \$40,000 residence of D. J. Guggenheim.

The Atlas Heating & Ventilating Company, 557 Fourth Street, has the sheet metal contract for the \$50,000 Fiegenbaum residence.

PALO ALTO, CAL.—Wallace & Stump have the sheet metal contract for the \$35,000 residence of E. M. Manning.

SACRAMENTO, CAL.—The Ahl Sheet Metal Company, 1615 21st Street, has been awarded the sheet metal contract for high school building in Vacaville, Cal.

SANTA CRUZ, CAL.—Izant & Wilson have been awarded the sheet metal contract for school building in Corallitos, Cal.

MADISON, WIS.—Wolff, Kulby & Hirshig Company, 17 South Pinckney Street, has been awarded the sheet metal contract for Montgomery Ward & Company store building.

LA CROSSE, WIS.—The Joseph Haag Roofing & Cornice Company, 135 East 12th Street, has the roofing contract for C. B. & Q. Railroad depot buildings.

BILLINGS, MONT.—The Ryniker-Winter Sheet Metal Works has the roofing contract for the Texas Oil Company building.

DALLAS, TEX.—The Atlas Metal Works, 2601 Alamo Street, proposes erection of 200x210 ft. factory building to cost about \$150,000.

LOS ANGELES, CAL.—The Forderer Cornice Works has the contract for metal spandrels; the A. J. Bayer Company, contract for hollow metal doors; C. S. Wilson, the sheet metal contract; and the Pioneer Metal Trim Company, the metal trim contract for J. W. Clune business building.

PASADENA, CAL.—The Central Sheet Metal Company has engaged in business at 33 Kendall Alley under the management of Robert T. McCallum.

WATERLOO, IA.—The L. E. Glaze Furnace & Sheet Metal Construction Company, 811 Commercial Street, has the heating contract for the Wm. I. Smucker duplex.

FONTANA, KAS.—Scaletty Brothers, Parsons, Kas., have been awarded the sheet metal work and roofing of the rural high school.

NEW ORLEANS, LA.—The Acme Blow Pipe & Sheet Metal Works, 713 Magazine Street, has been awarded the sheet

metal contract for electrical division building of New Orleans Public Service, Inc.

ST. LOUIS, MO.—The Mound Rose Cornice & Sheet Metal Works, 726 North Euclid Avenue, has the sheet metal work contract for \$1,500,000 Continental Life Insurance Company office building.

SAN ANTONIO, TEX.—Samuel Dean, 902 Waverly Street, has been awarded the roofing and sheet metal contract for \$2,000,000 Alamo National Bank building.

SOUTH BEND, IND.—Rummel, Inc., 2923 Mishawaka Ave., has filed incorporation papers. The capitalization is for \$25,000. The incorporators are W. A. Rummel, Violet M. Rummel and R. E. Asher. The firm deals in warm air furnace installations and accessories.

Series of Bulletins on Mixing Dampers Issued by National Heat Regulator

National Heat Regulation, covering the various types of controls manufactured by the National Regulator Co., Chicago, are featured in a group of fifteen bulletins issued by the company.

Bulletin No. 5 describes the operation of a two-pipe graduated thermostat used on straight blast systems of heating for controlling mixing dampers. It also is used for the control of mixing dampers in unit heaters.

Bulletin No. 5-4 describes a graduated two-pipe reversed thermostat for use with direct radiation.

No. 5-6 describes a compound straight-graduated and positive thermostat for controlling two sources of heat supply.

No. 5-8 discusses a duplex thermostat, graduated or intermediate type, for closing off heat sources from remote control.

In Bulletin No. 5-10 is discussed a two-temperature control thermostat known as the National Triplex for use in maintaining normal temperature in an office or similar building during the hours of occupancy and a lower temperature the remainder of the time.

Other bulletins are devoted to Metaphram valves, motors, and dampers. Size 8 $\frac{1}{2}$ in. by 11 in., with special binder. The bulletins are well illustrated with sketches and photographs.

**George Harms Appeals
To Salesmen for Aid
In Distributing Book**

George Harms, chairman of the Trade Development Committee of the National Association of Sheet Metal Contractors, is broadcasting an appeal by mail to the members of the various state salesmen's auxiliaries to assist in getting the widest possible distribution of the Trade Development Book "Standard Practice in Sheet Metal Work."

He suggests that salesmen not only sell their own company one or more of the books, but carry the story to the trade upon whom they call as well.

This is indeed a worthy appeal and should be heeded by salesmen who have the best interests of the industry at heart. Mr. Harms and

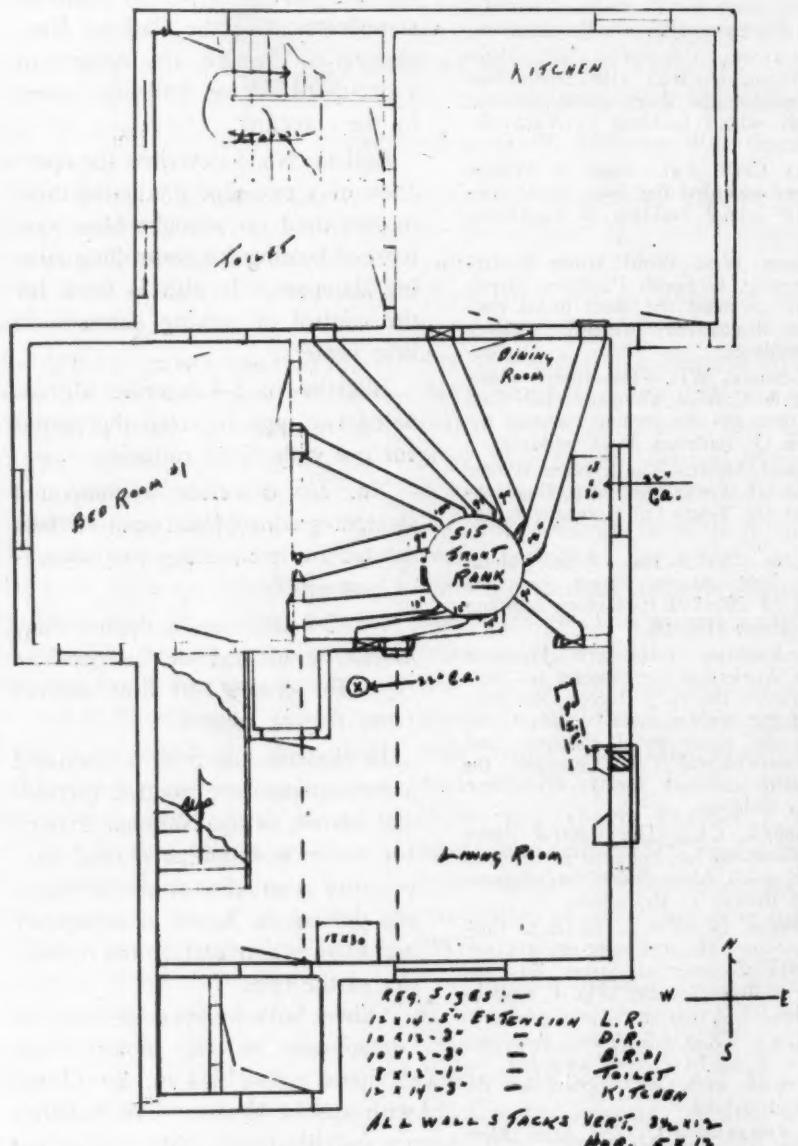
his committee have certainly worked hard in producing the book, which was badly needed in the industry, and now the salesmen can show their appreciation by giving the book the distribution it must have if it is to fulfill to the greatest possible extent its purpose.

**L. M. Rudolph Wants
\$380 for Warm Air
Job in Recent Issue**

To AMERICAN ARTISAN:

Your September 14th issue presents the problem of heating a home for \$250. My sketch enclosed herewith gives my idea of how this job should be arranged.

I find on the gentlemen's layout the use of tandem runs and no heat in toilet on first floor. I believe both practices are poor.



The Plan as Mr. Rudolph Would Have the System Installed

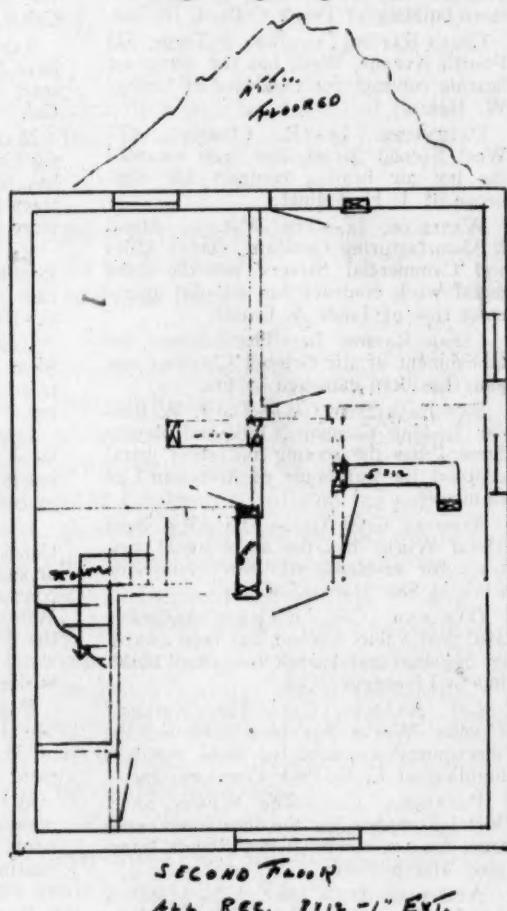
My estimate sheet shows \$248 for material alone.

It is nothing new to me for competitors to far underbid, but I feel that these men cannot be figuring the cost of their material, rather they just assume they can put in a job at a guessed figure. Also I find when they start to work on a job they commence to notice material alone costing them almost the price for which they are installing job; then the process of elimination takes place and the home owner can hold the shovel.

Why furnace installers continue to make such fool prices is beyond me.

Sometime ago the matter of prices worried me, but since I have laid my plans to heat homes, get a good profit for my dealer and let the competitor just put in a furnace and some pipe and earn nothing.

L. M. RUDOLPH,
Langenberg Mfg. Co. Salesman.



Milwaukee Sheet Metal Men Table National Convention Debate

The Master Sheet Metal Contractors' Association of Milwaukee held its monthly meeting on October 2. The session was called to order by Vice-President John Graf, and 14 members answered the roll call, according to C. Beernink, secretary.

The matter of the national convention was again brought up and thoroughly discussed, but the matter was tabled indefinitely.

The special committee on the revision of the city building code reported being unable to locate any copies of the code books. Two members present offered the use of their books to the committee and a report is to be made at the next meeting.

A. Goethel reported that he had the copies of the Sheet Metal Practice Book at his office and anyone wishing one was urged to get it at once by sending him a check for \$10.

Many comments were made by those who already had the book on the wealth of material and suggestions which this book contains. Every member is urged to get a copy as soon as possible.

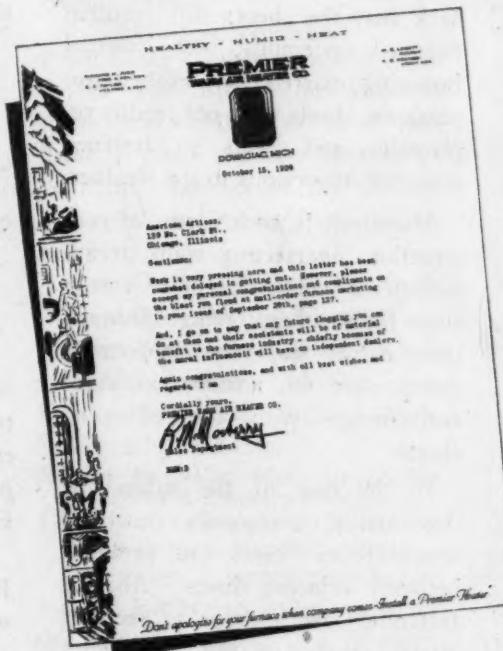
After considerable discussion a motion was made and carried that the chairman appoint a committee to arrange for the distribution of these books among the more influential and representative architects of the city. The chairman appointed Messrs. Jeske, Schumann and P. Biersack. It was suggested that the book should be brought to the attention of the local group of the American Institute of Architects, the Boys' Trade School, and the University Extension School. The secretary was instructed to draft a letter to go to all the local association members with a return letter for naming the architects with whom each firm does the most business.

As there was no further business, a general discussion followed which swung into a discussion of fan capacities in blower and ventilating

systems. Mr. Goethel told of some various interesting installations and claims made by fan people. He promised some interesting comparison figures at a future meeting from a test which would be made this month.

Wisconsin Sheet Metal Men Pushing Sale of New Sheet Metal Book

The Master Sheet Metal Contractors' Association of Wisconsin held its monthly meeting October 2, 1929.



There's Inspiration in This Letter

J. R. Suettinger of Two Rivers acted as chairman in the absence of President Geusenhainer. The following members were present:

Alfred Goethel, C. C. Tolg, Paul Biersach, Wm. Gehrke, Otto Geusenhainer, J. R. Suettinger, W. A. Belau.

The matter of a report on the results of the association's experience in Simplified Practices to the Department of Commerce is in production.

The annual convention of the association was discussed, and the following members were appointed as the convention committee:

Paul Biersach, Chairman.
Louis Reinke,
Alfred Goethel,
H. Geusenhainer,
C. C. Tolg,

W. A. Belau,
C. R. Greenwood.

A suggestion was made that members give to their foreman and some of their mechanics the new sheet metal book as a Christmas present.

Alfred Goethel stated that he would send out a special letter to all sheet metal contractors telling about the new book, in order to help the association sell as many as possible.

An interesting discussion on various subjects for the good of the industry took place, followed by adjournment.

Pennsylvania Cities

May Now Weld Buildings

An increase in the use of welding in the construction of buildings in the state of Pennsylvania is foreseen as a result of the passage by the legislature of that state, of a law which allows this type of construction to be used in first-class cities. The new law gives in detail a building code for cities of the first class and in this code is a section giving permission to commissioners of buildings in such cities to adopt welding as an erection method.

According to Frank P. McKibben, nationally known authority on the use of welding in building construction, such legislation is needed throughout the entire country. "This method of construction," says McKibben, "has been successfully applied to at least 50 buildings in this country, varying in height from one to eleven stories, the one containing the greatest amount of steel being a factory building constructed by the General Electric Company in Philadelphia. So many successful applications have been made that the process has been removed from the realm of experimentation and its usefulness is established as a satisfactory tool for constructive effort, not only in structural work but also in many other fields."

Numerous municipalities, according to McKibben, are at present revising their building codes to per-

mit the erection of welded buildings. He mentions two model codes now available, one recently adopted by the American Welding Society and the other, that of the Pacific Coast Building Officials Conference. The latter is a society whose members are building commissioners and inspectors in western cities, organized to draft a uniform building code. This uniform code, although in existence but two years, has been adopted by more than 42 municipalities in the west and south.

As the Pennsylvania law is applicable only to cities of the first class, municipalities below that grade are free to adopt their own codes.

Has Patented Galvanized Sheet Clapboard Formation Process

The vast increase in the number of uses to which sheet metal has been put in recent years and the constant pressure being brought to bear for materials of permanence has been a great encouragement to those men in the sheet metal industry who are of an inventive turn of mind.

The most recent patented invention to come to the attention of the sheet metal trade is that of John J.



John J. Muryn

Muryn, 943 Humboldt Avenue, Milwaukee, Wisconsin. His patent covers a method of forming galvanized and other sheets, in exact reproduction of clapboard or weatherboard siding so generally used in wooden buildings. The formation of weatherproof corner sections, exactly matching and fitting the siding, is included.

One of the accompanying illustrations gives a perspective view of a corner of the outside of a build-

ing with outer walls and corners of this new construction fastened to angle iron framing. It presents the structural details of all fastenings and parts.

In the past, the attempts have been numerous to provide a finished appearance for sheet metal walls that would be more slight than corrugated or flat surfaces. The clapboard or weatherboard effect, with concealed joints between sheets, has been attempted. All previous forming methods have suffered the drawback that the sheets still required external fastenings, such external fastening marred the finished appearance, sheets were not readily replaceable, and sheets so fastened were not impervious to the weather.

Moreover, in such forms of construction, intersecting walls, terminating in corners, require corner stops for weatherproofing. Hitherto, these corner stops for clapboarded sheets were not uniform in shape and design with the adjoining sheets.

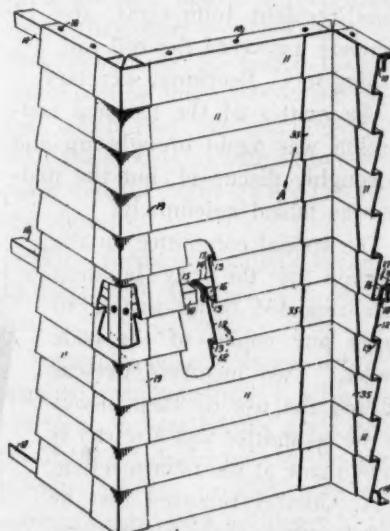
In the case of the subject of this article, completely concealed weatherproof joints are provided between adjacent sheets. Also all fastenings are such as to securely attach sheets to the framework without external fasteners. In addition, the corner stops formed by this process conform to the shape of the clapboard design and present a uniform finished appearance, besides assuring weatherproof corners. These corners are especially practical and separately usable for corner protection of wooden clapboards.

While adaptable to exterior walls of buildings of any extent, this construction is particularly suitable for the erection of small or sectional all-metal buildings, such as filling stations, booths, yard offices, etc.

Mr. Muryn states that he has actually erected several such, without using any specially designed tools. Operating thus, using only the ordinary machine, bench and hand tool equipment of the sheet metal shop, he states that the cost of forming and erecting sheets is well within

the range of similar cost for other all-metal structures.

Mr. Muryn would entertain proposals, from any responsible source, looking to the manufacture and distribution of sheets formed by his patented process, either through



Illustrating Muryn's Invention

financing a company for manufacturing, the outright sale of his patent, or by manufacturing under patent license on a royalty basis. His patent dates from April 3, 1928.

Inferior Counterfeits of New Bills Detected

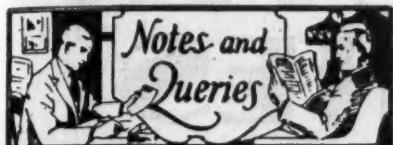
The first attempt to counterfeit the new small-sized currency has ended in failure, according to the chief of the Secret Service, W. H. Moran.

Advices have been received by the Secret Service that several counterfeits had been placed in circulation in a small town in Iowa, but were quickly detected. One man was reported under arrest on charges of counterfeiting.

Details of the counterfeiting scheme and the location where the fraudulent bills were found were withheld by Chief Moran pending developments. He said, however, that the counterfeits were poor imitations and few people would have been deceived.

It was the official opinion that the new bills were exceedingly hard to counterfeit. It is the expectation of the Department of the Treasury that the number of counterfeits will

gradually decrease as efforts to imitate the new bills end in failure.



Oil Burning Garage Heater

From Hawthorne Hardware Company, 3661 Ogden Avenue, Chicago.

Can you tell us who makes a portable oil burning heater for a garage?

Ans.—Quaker Manufacturing Company, 215 North Michigan Avenue, Chicago.

"Burnham" Boiler

From E. C. Henry & Company, 4th Street, East of Johnson, Bay City, Michigan.

We should like to know who makes the "Burnham" boiler.

Ans.—Burnham Boiler Corporation, 1038 South Kolmar Avenue, Chicago, Illinois.

Sheet Metal School in Milwaukee

From B. H. Sluter, Juneau, Wisconsin.

Do you know whether there is a sheet metal workers' school in Milwaukee?

Ans.—Yes. Vocational School, 309 Sixth Street; R. C. Cooley, Principal. Both the practical and technical part of the sheet metal trade is taught here.

Who Makes Three Legged Folding Trestle?

From P. B. Simons, Madisonville, Kentucky.

Please tell me who makes a three-legged folding trestle, the legs telescopic.

Readers: Can you furnish this information?

Burners for Johnson Soldering Furnace

From Weber, the Roofer, 4518 Cottage Grove Avenue, Chicago.

Who in Chicago can furnish me with burners for the Johnson Soldering Furnace, made by the Johnson Gas Appliance Company of Cedar Rapids, Iowa?

Ans.—Their Chicago office is known as the Johnson Manufacturing Company, 729 West Washington Street.

A Competition Furnace

From F. E. Hawks, Millersburg, Michigan.

Can you tell me where I can get a good furnace at a reasonable price

with which I can meet the competition of the mail order catalog prices and still have a fair margin of profit?

Ans.—Referred to the furnace manufacturers.

Cabinet Clothes Dryers.

From The Hehnke-Lohmann Company, 210-212 West Second Street, Grand Island, Nebraska.

Please advise us who makes a cabinet clothes dryer.

Ans.—The W. E. Lamneck Company, Columbus, Ohio, and The Williamson Heater Company, Cincinnati, Ohio.

Window Ventilators.

From Henry I. Little, Knoxville, Iowa.

Can you furnish me with the name and address of firms that make a metal window shutter or ventilator that fits in the window and opens and closes from the inside?

Ans.—Arex Company, 333 North Michigan Avenue; Ilg Electric Ventilating Company, 2850 North Crawford Avenue; and The Airo-lite Company, 228 North LaSalle Street; all of Chicago.

Repairs for Boiler Made by Shirley Radiator & Foundry Company

From D. G. Sammons, 220 North McKinley Avenue, Muncie, Indiana.

Where can I secure a grate bar for the hot water boiler made by the Shirley Radiator and Foundry Company?

Ans.—This concern has been out of business for over ten years, and as far as we know, their boiler is not being made by anyone. However, Northwestern Stove Repair Company, 654 West Roosevelt Road, Chicago, can furnish grates for one of this concern's boilers. Send outline of grate to them and possibly it may be just the one they can furnish grates for.

Natural Gas Burners for Furnaces.

From Oliver Lowry, 628 34th Avenue, Meridian, Mississippi.

Please tell me who makes natural gas burners for furnaces.

Ans.—Standard Heating and Radiator Company, 220 Penn Avenue, Pittsburgh, Pennsylvania; Wonder Worker Gas Appliance Company, 59 Main Street, Cincinnati, Ohio; XXth Century Heating and Ventilating Company, Akron, Ohio; Johnson Gas Appliance Com-

pany, Cedar Rapids, Iowa; Columbia Burner Company, Toledo, Ohio, and Cleveland Gas Burner and Appliance Company, Cleveland, Ohio.



Metal Branch meeting of the National Hardware Association, Atlantic City, New Jersey, Tuesday, October 22, 1929.

American Hardware Manufacturers' Association Convention, Atlantic City, New Jersey, October 21, 22, 23 and 24, 1929. Hotel headquarters, Marlborough-Blenheim. Charles F. Rockwell, Secretary, 342 Madison Ave., New York City.

National Hardware Association of the United States Convention, Atlantic City, New Jersey, October 21, 22, 23 and 24, 1929. Hotel headquarters, Marlborough-Blenheim. George A. Fernley, Secretary-Treasurer, 505 Arch St., Philadelphia, Pennsylvania.

National Warm Air Heating Association, Columbus, Ohio, December 3 and 4, 1929. Allen Williams, 174 East Long Avenue, Columbus, Managing Director.

Kentucky Hardware and Implement Association Convention, Brown Hotel, Louisville, January 14, 15, 16 and 17, 1930. J. M. Stone, Secretary, 200 Republic Building, Louisville.

Texas Hardware and Implement Association Convention and Exhibition, Houston, January 21, 22 and 23, 1930.

American Society of Heating & Ventilating Engineers and International Heating and Ventilating Exposition, Philadelphia, January 27 to 31, 1930. A. V. Hutchison, 29 West 39th Street, New York, Secretary.

Missouri Retail Hardware Association Convention and Exhibition, New Hotel Jefferson, St. Louis, January 28, 29 and 30, 1930. F. X. Zecherer, Secretary, 5106 North Broadway, St. Louis.

Indiana Retail Hardware Association Convention, Manufacturers' Building, Indiana State Fair grounds, Indianapolis, January 28, 29, 30 and 31, 1930. G. F. Sheely, Secretary, 911-913 Meyer Kiser Bank Building, Indianapolis.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6 and 7, 1930. B. Christianson, Secretary, Stevens Point. G. W. Kornely, Exhibit Manager, 1476 Green Bay Ave., Milwaukee.

Ohio Hardware Association Convention and Exhibition, Columbus, Ohio, February 4, 5, 6 and 7, 1930. James B. Carson, Secretary, 315 Mutual Home Building, Dayton.

Illinois Retail Hardware Association Convention and Exhibition, Hotel Sherman, Chicago, February 11, 12 and 13, 1930. Paul M. Mulliken, Managing Director, Elgin.

Iowa Retail Hardware Association Convention and Exhibition, Hotel Savery and Des Moines Coliseum, Des Moines, February 11, 12, 13 and 14, 1930. A. R. Sale, Secretary, Mason City.

Illinois Sheet Metal Contractors' Association, Springfield, Illinois, April 8, 9, 10, 1930. Charles L. Radtke, 1049 East 8th Street, La Salle, Illinois, Secretary.

RANDOM NOTES AND SKETCHES

A Dirty Trick

Miss Fingles, Baltimore, daughter of W. H., Sr., at a football game: "O, look, the players are all covered with mud. How will they ever get it off?"

Miss Markle, Pittsburgh, daughter of W. C. Markle, Secretary National Sheet Metal Association: "What do you think the scrub team is for?"

* * *

Art Criticism

E. B. Langenberg, Langenberg Mfg. Co.: "By George, Charlie, when I look at one of your paintings I stand and wonder—"

Charlie Hall, Hall-Neal, Indianapolis: "How I do it?"

E. B.: "No, why you do it."

* * *

He Was No Chameleon

Mrs. "Ned" Cummings (Richardson & Boynton Company) (to cop at busy intersection): "What's the idea, no lights here?"

Guardian of the Law: "I'm the light at this corner, lady."

Her Majesty: "Then turn green so I can cross!"

* * *

Remarks

Al Kahlenberg, Friedley-Voshardt Co., received the following note from one of his shop foremen:

"I am sending in the accident report on Casey's foot when he struck it with the spike maul. Now, under 'Remarks,' do you want mine or do you want Casey's?"

* * *

Why She Pauses for Breath

"D'you know, I haven't spoken to my wife for five years?"

"I shouldn't let that worry you, old man. Your turn is bound to come again!"

* * *

Mistake? A Downright Error

Doctor: "What you need to do, sir, is to relax. You are overwork-

BY
SIDNEY ARNOLD



ing yourself. Too much work and worry will send any man to his grave before his time. Now, what is your occupation?"

Bill Waters, Indianapolis: "I am a sheet metal and warm air heating contractor."

Doctor: "Let me examine your pulse again; I must have made a mistake."

* * *

When They Worked

"We have mines so deep," boasted the Welshman, "that it takes half an hour to go down and come up."

"That's nothing," said Bill Laffin, Charles Johnson Co. "We have mines so deep it takes half a day to do down and the same to come up."

"Ridiculous!" exclaimed the Welshman. "When is the work done?"

"Work?" said Bill. "Oh, the night shift does that."

* * *

My old friend, Thos. I. Peacock, dropped in for a short visit on Saturday of last week. Tom is now the Chicago district manager of Preferred Oil Burners, Inc., Peoria, Illinois.

* * *

Amateur Buggy

Harvey Manny, Robinson Furnace Co.: "Honestly, now, you would never have thought this car



of mine was one I had bought second-hand, would you?"

I. L. Jones, International Heater Co. (in all seriousness): "Never in my life. I thought you had made it yourself."

* * *

300 Per Cent Home

Wanted—To sell or trade my brick residence at Aurora, Illinois. Reason, need more rooms; had one child when I moved in; now I've got seven; good place.

That sounds suspiciously like J. A. Brandt, sheet metal instructor at Mooseheart, Illinois, who lives in Aurora.

* * *

Clever Husband

I really haven't the meanness of heart to tell the names of the ladies whom I overheard at a sheet metal convention give the following dialogue:

"And you really think your husband clever?"

"Yes. He remembers my birthdays and forgets my age."

* * *

Seeing and Believing

Charlie Thorp, Fort Wayne, Indiana: "But surely, seeing is believing."

"Not necessarily," replied Paul Jordan, Indianapolis. "For instance, I see you every day."

* * *

Fine Job Advertised

Page Tommy Thompson of Verona. I think he worded this ad.:

"Men Wanted—Experienced in handling girls; must do heavy work."

* * *

Last Long Drive

Tommy Richardson, Richardson & Boynton: "Hi, caddie! Isn't Major Arny out of that bunker yet? How many strokes has he had?"

Caddie: "Seventeen ordinary, sir, and one apoplectic!"

Car Buying Wave Engulfs Market

Nearly 18,000 Freight Cars Booked This Month, and Inquiry Still Heavy—Ford Buying Iron, Forecasting Heavier Production—Mill Rates Down

OCTOBER is developing into the best railroad freight car buying month in five years. Distribution of 5,754 cars by the Santa Fe and 3,500 by the Southern and the placing of 1,000 by the Great Northern with its own shops brings October awards—with the month barely half gone—to 17,900. For the year to date car orders total 88,500, exceeding any whole year since 1924.

Despite the week's awards of more than 10,500 cars, well over 10,000 cars are pending.

Pig iron sales are slow at Pittsburgh, with little additional forward tonnage booked.

Sellers continue to pick up small lots, with a fair sprinkling of car-load orders for prompt shipment, but new business is considerably below the September volume. Some buyers are content to place pig iron as needed rather than contract for entire quarter.

This provides a steady run of orders, but restricts backlogs on producers' books. Shipments so far this month are about the same as a month ago.

Slightly heavier releases by some interests are offsetting lighter movement by others.

Production is running ahead of shipments. Large lot inquiries are scarce, the largest being one for 3,500 tons of basic for Edgewater Steel Co.

Prices are holding generally at \$18.50, valley, for basic and No. 2 foundry and \$19 for malleable and bessemer.

Steady shipment of pig iron at Birmingham continued booking of small lot orders and high anticipation for improvement even on this condition is the market report for the week.

Republic Iron & Steel Co. has blown in its No. 1 blast furnace at Thomas. Quotations remain firm

for this year's delivery, \$14 to \$14.50, for No. 2 foundry, with no consideration yet for next quarter.

One of the larger melters of iron reports recession in business, but the lull will be brief.

Despite only moderate pig iron buying at Chicago, shipments are at a high level, showing a gain over last month.

The slump at automotive casting plants is partly offset by gains in other lines, with steady spot buying.

Ford interests have been negotiating for 15,000 to 20,000 tons of high silicon iron in this district, but no sale has been made.

Base price is firm here at \$20, with weakness shown by lake furnaces in competitive territory of central and southern Michigan.

Non-Ferrous Metals

Low prices for tin and quiet demand for the other non-ferrous metals were the features of the week.

Lack of support sent the tin market to the lowest level in at least five years, but large buying was done at the low level Monday.

Other metal prices have remained steady, though buying has been light for several weeks. Producers are not in position where they have to make sales immediately.

Moreover, they take the attitude that they have nothing to gain at present by making concessions. The result is price firmness. Copper producers are well booked for November. Lead and zinc users appear to have much to buy for next month.

Brass and copper mills continue busy, but their backlogs are narrowing. The result is that sales forces are working actively. Published base prices are unchanged.

Copper

Domestic buying has been light, while export has shown some pick-

up at times. September statistics showed an increase in total stocks of nearly 1,400 tons, though refined alone decreased more than 9,000 tons.

The latter action was due partly to lighter output of refined metal and partly to an increase in domestic and export shipments.

Domestic shipments continue to run several thousand tons a month larger than last year. Export shipments are lagging a little. September shipments were 143,964 tons, of which 98,043 tons were domestic. Refined stocks were 94,751 tons.

The market is better balanced between demand and supply than in a number of months. Shipments now scheduled for October indicate larger shipments than last month.

Zinc

Prime western continues to hold at 6.80c, East St. Louis, with light sales, mostly for early shipment. The ore market also is steady.

Tin

The price went down about 1 cent in the week, with users in this country continuing to hold back except on a little spot buying.

Future sales became active at the low prices of Monday. The market is full of rumors about prices being depressed purposely, about curtailment of output, lack of curtailment, a fight in London for control, etc.

Lead

September statistics have given a stronger appearance to the market. Sales continue light, however. Domestic shipments were largest last month in more than a year, with the exception of March. Production of refined and antimonial lead dropped 7,000 tons during September, while total stocks on September 30 were 72,590 tons, against 76,575 tons a month earlier, a difference of 3,985 tons.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

Note: These Prices Are Chicago Warehouse Prices of Metal, to Which Must Be Added Freight to Cities Outside of Chicago.

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$20.00
Southern Fdy. No. 2.	21.51
Lake Superior Charcoal	27.04
Malleable	20.00

FIRST QUALITY BRIGHT CHARCOAL TIN PLATES

IC 20x28 112 sheets	.82
IX 20x28	.88
XXX 20x28 56 sheets	14.50
XXXX 20x28	15.50
XXXXX 20x28	17.00

TERNE PLATES

Per Box	
EC 20x28, 40-lb. 112 sheets	\$26.70
IX 20x28, 40-lb. 112 sheets	29.70
EC 20x28, 25-lb. 112 sheets	22.30
IX 20x28, 25-lb. 112 sheets	25.50
EC 20x28, 20-lb. 112 sheets	20.25
IV 20x28, 20-lb. 112 sheets	22.00

"ARMCO" INGOT IRON PLATES

No. 8 ga.—100 lbs.	\$4.15
8/16 in.—100 lbs.	4.05
4 in.—100 lbs.	3.35

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$12.00
Cokes, 90 lbs., base, 20x28	12.20
Cokes, 100 lbs., base, 20x28	13.40
Cokes, 107 lbs., base, IC 20x28	12.76
Cokes, 135 lbs., base, IX 20x28	14.75

BLUE ANNEALED SHEETS

Base 10 ga.—per 100 lbs.	\$2.25
"Armco" 10 ga.—per 100 lbs.	4.15

ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs.	\$3.85
No. 22	per 100 lbs.	4.00
No. 24	per 100 lbs.	4.05
No. 26	per 100 lbs.	4.15
No. 27	per 100 lbs.	4.20
No. 28	per 100 lbs.	4.30
No. 29	per 100 lbs.	4.45
No. 30	per 100 lbs.	4.55

"ARMCO" GALVANIZED

"Armco"	34—per 100 lbs.	\$6.15
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GALVANIZED

No. 16	per 100 lbs.	\$4.40
No. 18	per 100 lbs.	4.55
No. 20	per 100 lbs.	4.70
No. 22	per 100 lbs.	4.75
No. 24	per 100 lbs.	4.90
No. 26	per 100 lbs.	5.15
No. 27	per 100 lbs.	5.25
No. 28	per 100 lbs.	5.40
No. 30	per 100 lbs.	5.50

BAR SOLDIER

Warranted 50-50 per 100 lbs.	\$31.00	
48-52	per 100 lbs.	30.00
45-55	per 100 lbs.	27.50
Plumber's	per 100 lbs.	26.00

ZINC

In Slabs		\$7.35
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SHEET ZINC

Cask Lots (600 lbs.)	...\$12.00
Sheet Lots	14.00

BRASS

Sheets, Chicago base	24 1/4 c
Mill base	23 3/4 c
Tubing, brazed, Chicago base	31 1/2 c
Mill base	30 3/4 c
Tubing, seamless, Chicago base	29 1/4 c
Mill base	28 3/4 c
Wire, Chicago base	24 1/4 c
Mill base	23 3/4 c
Rods, Chicago base	22 1/4 c
Mill base	21 1/4 c

COPPER

Sheets, Chicago base	27 1/2 c
Mill base	26 1/2 c
Tubing, seamless, Chicago base	30 1/2 c
Mill base	29 1/2 c
Wire, plain rd., 8 B. & S. G.	28 1/2 c
and heavier	25 1/2 c

LEAD

American Pig	\$7.60
Bar	8.60

TIN

Bar Ti n.	per 100 lbs. 49.00
Pig Tin	per 100 lbs. 48.00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16...6c	per lb.
Roll board	7 1/2c per lb.
Mill board 3/32 to 1/4	7 1/2c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6.00 per roll

BRUSHES

Furnace Pipe Cleaning	Bristle with handle each	80.75
Fine Cleaning	Steel only, each	1.25

CEMENT, FURNACE

American Seal, 5-lb. cans, net	8.45
American Seal, 10-lb. cans, net	8.55
American Seal, 25-lb. cans, net	2.25

CHIMNEY TOPS

Adams' Revolving	Wt. Dots.	Price Dots.
4 in.	.21 lbs.	\$1.00
6 in.	.24 lbs.	1.10
7 in.	.30 lbs.	1.25
8 in.	.33 lbs.	1.50
9 in.	.31 lbs.	1.60
10 in.	.36 lbs.	1.80
12 in.	.46 lbs.	2.20
14 in.	.60 lbs.	3.40

CLINKER TONGS

Each		\$1.50
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CLIPS

Damper	No-Rivet Steel, with tail pieces, per gross	39.50
Rivet	Steel, with tail pieces, per gross	39.50
Tail	pieces, per gross	7.50

CORNICE BRAKES

Chicago Steel Bending	Net	
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CUT-OFFS

Gal., plain, round or cor. rd.		
26 gauge	30%	
28 gauge	35%	

DAMPERS

Yankee Hot Air		
7 Inch, doz.	\$1.60	
9 Inch, doz.	2.20	
9 Inch, doz.	2.60	
10 Inch, doz.	2.80	
12 Inch, doz.	3.50	
14 Inch, doz.	5.00	

ADAMS NO. 1 CHECK

Check and Collar Complete		
5 inch, each	2.00	
9 inch, each	2.25	

END CHECK ONLY

8 inch, each	1.60	
9 inch, each	1.85	

COLLAR ONLY

8 inch, each	50	
9 inch, each	65	

NO. 2 CHECK

8 inch, each	1.00	
9 inch, each	1.00	

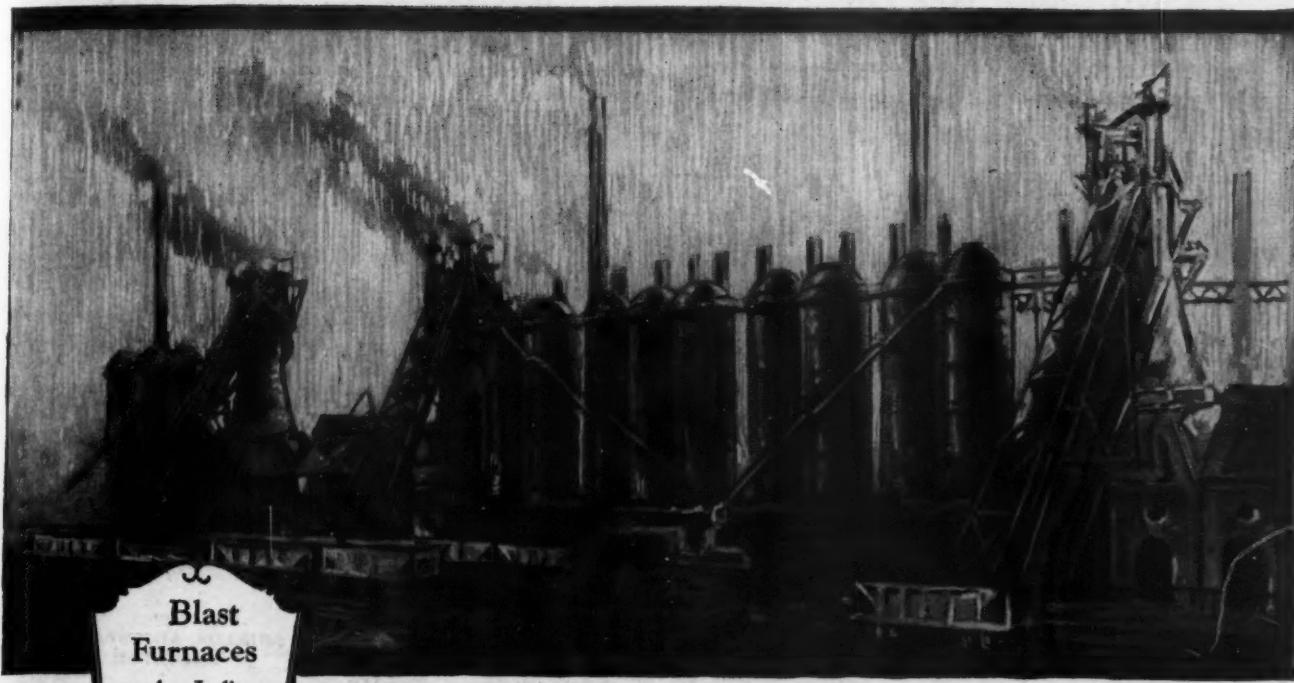
10% DISC. ON ADAMS NO. 1 AND NO. 2 CHECK

10% Disc. on Adams No. 1 and No. 2 Check		
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DIAMOND SMOKE PIPE

7 inch, doz.	\$2.00

</tbl



At this great plant, the largest independent steel works in the Middle West, every process is accomplished by science, equipment and experience that have been proved to produce the high grade of steel that bears the Inland trademark.

INLAND *Copper alloy* STEEL SHEETS

Since Pig Iron is the backbone of INLAND *Copper alloy* STEEL SHEETS, we count no effort wasted to make this metal pure, uniform, dependable. Thus we make a careful analysis and study of all coke, ore and limestone before the materials are charged into the blast furnaces, where, under the supervision of experts, they are converted into pig iron. Inland pig iron is known far and wide for its splendid quality and its uniformity. Those who use it, refer to it as "unusually high grade iron."

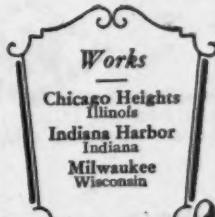
Remember the importance of these preliminary steps, when you see the excellence of metal and finish in INLAND *Copper alloy* STEEL SHEETS.

Send for our descriptive booklet. It is new, complete.

Contributing Member Sheet Steel Trade Extension Committee.



INLAND STEEL COMPANY
38 South Dearborn Street
Chicago



SHEETS BARS PLATES SHAPES RAILS TRACK ACCESSORIES RIVETS BILLETS

TONCAN



**Protect your Customers with
rust-resisting TONCAN IRON**

RUST PROTECTION—fire protection—these are the things your customers want.

And these are the things you give them when you use Toncan Copper Mo-lyb-den-um Iron. It resists rust and the stealthy attacks of corrosion, longer than any other ferrous metal. It's as fine a protection against fire as you can use.

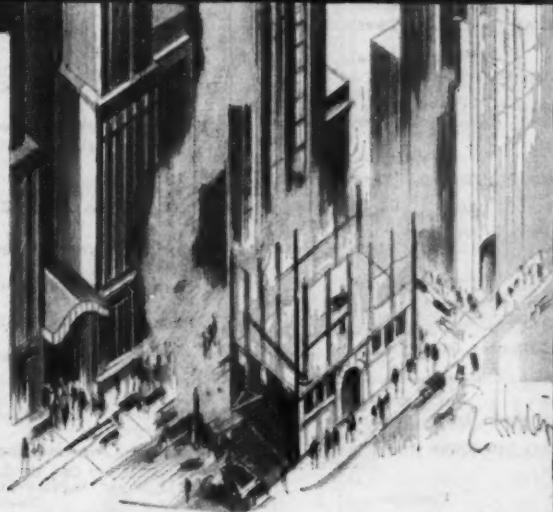
Leading sheet metal contractors use Toncan consistently. They have learned from experience that this super-iron enables them to hold customers and to sell their services more effectively.

For roofing—piping—stoves—ventilators—sheeting of all kinds—and a hundred varied uses, Toncan will build business for you.

We have a complete plan to help you increase your business and add to your profits. Write for it.

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Massillon, Ohio

WORLD'S LARGEST AND MOST HIGHLY
SPECIALIZED ALLOY STEEL PRODUCERS



REG. U.S. PAT. OFF.
TONCAN
COPPER
Mo-lyb-den-um
IRON

BUYERS' DIRECTORY

Air Cleaners.	Dies—Punch & Press.	Furnace Rings.	Heaters—Domestic Hot Water.
Meyer & Bro. Co., F., Peoria, Ill. Watt Mfg. Co., Sterling, Ill.	La Salle Machine Works, Chicago, Ill.	Eller Mfg. Co., Canton, Ohio Forest City-Walworth Run Foundries Co., Cleveland, Ohio Milwaukee Corrugating Co., Milwaukee, Wis.	Alamo Heater Co., Chicago, Ill. Standard Fdy. & Furnace Co., De Kalb, Ill.
Air Conditioning Machines.	Diffuser—Air Duct.	Furnace Switch—Automatic.	Heaters—School Room.
Heating Systems Corp., Watt Mfg. Co., Joliet, Ill. Sterling, Ill.	Aeolus-Dickinson Co., Chicago, Ill.	The Mercoid Corp., Chicago, Ill.	Meyer Furnace Co., The, Peoria, Ill.
Asbestos Paper.	Doors—Metal.	Furnaces—Warm Air.	Waterman-Waterbury Co., Minneapolis, Minn.
Sail-Mountain Co., Chicago, Ill.	Lupton's Sons Co., David, Philadelphia, Pa.	Agricola Furnace Co., Gadsden, Ala.	Hotels.
Asbestos Liquid.	Drills—Electric.	American Furnace Co., St. Louis, Mo.	Fort Shelby Hotel, Detroit, Mich.
B. & F. Mfg. Co., Des Moines, Iowa	Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.	Brillion Furnace Co., Brillion, Wis. Emrich Co., C., Columbus, Ohio Farris Furnace Co., Springfield, Ill.	Humidifiers.
Benches—Steel.	Drive Screws—Hardened Metallic.	Forest City-Walworth Run Fdy., Cleveland, Ohio	Automatic Humidifier Co., Cedar Falls, Iowa
Maplewood Machinery Co., Chicago, Ill.	Parker-Kalon Corp., 200 Varick St., New York	Fox Furnace Co., Elyria, Ohio Heating Systems Corp., Joliet, Ill.	Meyer & Bro. Co., F., Peoria, Ill.
Blast Gates	Eaves Trough.	Henry Furnace & Fdy. Co., Cleveland, Ohio	Mueller Furnace Co., L. J., Milwaukee, Wis.
Berger Bros. Co., Philadelphia, Pa.	Barnes Metal Products Co., Chicago, Ill.	Hess Warming & Ventilating Co., Chicago, Ill.	Perfect Humidifier Co., St. Louis, Mo.
Blowers—Furnace.	Berger Bros. Co., Philadelphia, Pa.	Homer Furnace Co., Coldwater, Mich.	J. L. Skuttle Mfg. Co., Dowagiac, Mich.
Lakeside Co., Hermansville, Mich.	Eller Mfg. Co., Canton, Ohio	Langenberg Mfg. Co., St. Louis, Mo.	Watt Mfg. Co., Sterling, Ill.
Boats—Stove.	Lupton's Sons Co., David, Philadelphia, Pa.	Lennox Furnace Co., Marshalltown, Ia.; Syracuse, N. Y.	Lath—Expanding Metal.
The Kirk-Latty Co., Cleveland, Ohio	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Marshall Furnace Co., Marshall, Mich.	Eller Mfg. Co., Canton, Ohio
Lamson & Sessions Co., Cleveland, Ohio	New Jersey Zinc Sales Co., The, New York, N. Y.	Majestic Co., Huntington, Ind.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.	Rockford Sheet Steel Co., Rockford, Ill.	Mayie Fiebeger Furnace Co., Newark, Ohio	Machines—Crimping.
Brakes—Bending.	Elbows and Shoes—Conductor.	Meyer Furnace Co., The, Peoria, Ill.	Bertsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co., Chicago, Ill.	Barnes Metal Products Co., Chicago, Ill.	Midland Furnace Co., Columbus, Ohio	Machinery—Culvert.
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.	Dieckmann Co., Ferdinand, Cincinnati, Ohio	Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.	Bertsch & Co., Cambridge City, Ind.
Brakes—Cornices.	Eller Mfg. Co., Canton, Ohio	Premier Warm Air Heater Co., Dowagiac, Mich.	Machines—Tinsmith's.
Dreis & Krump Mfg. Co., Chicago, Ill.	Lupton's Sons Co., David, Philadelphia, Pa.	Richardson & Boynton Co., New York, N. Y.	Bertsch & Co., Cambridge City, Ind.
Brass and Copper.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Robinson Co., A. H., Massillon, Ohio	Miters.
American Brass Co., Waterbury, Conn.	Rockford Sheet Steel Co., Rockford, Ill.	Standard Fdy. & Furnace Co., De Kalb, Ill.	Eller Mfg. Co., Canton, Ohio
Cans—Garbage.	Fittings—Conductor.	Success Heater Mfg. Co., Des Moines, Ia.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City
Osborn Co., The J. M. & L. A., Cleveland, Ohio	Barnes Metal Products Co., Chicago, Ill.	XXth Century Heating & Ventilating Co., Akron, Ohio	Miters—Eaves Trough.
Castings—Malleable.	Eller Mfg. Co., Canton, Ohio	Waterman-Waterbury Co., Minneapolis, Minn.	Barnes Metal Products Co., Chicago, Ill.
Fanner Mfg. Co., Cleveland, Ohio	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Western Steel Products Co., Duluth, Minn.	Berger Bros. Co., Philadelphia, Pa.
Ceilings—Metal.	Flue Thimbles.	Williamson Heater Co., Cincinnati, Ohio	Eller Mfg. Co., Canton, Ohio
Eller Manufacturing Co., Canton, Ohio	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Wise Furnace Co., Akron, Ohio	Parker-Kalon Corp., New York, N. Y.
Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Furnace Cement—Asbestos.	Grilles.	Nails—Hardened Masonry.
Chaplets.	Connors Paint Mfg. Co., Wm., Troy, N. Y.	Auer Register Co., Cleveland, Ohio	Parker-Kalon Corp., New York, N. Y.
Fanner Mfg. Co., Cleveland, Ohio	Eller Mfg. Co., Canton, Ohio	Harrington & King Perforating Co., Chicago, Ill.	Nails—Lead Head.
Chimney Tops.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Hart & Cooley Co., New Britain, Conn.	Deniston Co., Not Inc., Chicago, Ill.
Standard Ventilator Co., Lewisburg, Pa.	Furnace Cement—Liquid.	Independent Register & Mfg. Co., Cleveland, Ohio	Oil Burners.
Cleaners—Vacuum.	Technical Products Co., Pittsburgh, Pa.	Tuttle & Bailey Mfg. Co., Chicago, Ill.	McIlvaine Burner Corp., Evanston, Ill.
Brillion Furnace Co., Brillion, Wis.	Furnace Cleaners—Hand.	Grilles—Stove Front.	E. L. Miller Mfg. Co., Kansas City, Mo.
National Super Service Co., Toledo, Ohio	J. L. Skuttle Mfg. Co., Dowagiac, Mich.	Tuttle & Bailey Mfg. Co., Chicago, Ill.	Ornaments—Sheet Metal.
Williamson Heater Co., Cincinnati, Ohio	Furnace Controls.	Harrington & King Perforating Co., Chicago, Ill.	Eller Mfg. Co., Canton, Ohio
Copper.	The Mercoid Corp., Chicago, Ill.	Handles—Boller.	Geroch Bros. Mfg. Co., St. Louis, Mo.
American Brass Co., Waterbury, Conn.	Furnace Cleaners—Suction.	Berger Bros. Co., Philadelphia, Pa.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City
Rockford Sheet Steel Co., Rockford, Ill.	Brillion Furnace Co., Brillion, Wis.	Handles—Soldering Iron.	Miller & Doing, Inc., Brooklyn, N. Y.
Cornices.	National Super Service Co., Toledo, Ohio	Hyro Mfg. Co., New York, N. Y.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City
Eller Manufacturing Co., Canton, Ohio	Williamson Heater Co., Cincinnati, Ohio	Hangers—Eaves Trough.	Connors Paint Mfg. Co., Wm., Troy, N. Y.
Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Furnace Fans.	Berger Bros. Co., Philadelphia, Pa.	Paint.
Cut-off—Rain Water.	A-C Mfg. Co., Pontiac, Ill.	Eller Mfg. Co., Canton, Ohio	Patterson—Furnace and Stove.
Eller Mfg. Co., Canton, Ohio	Brundage Co., The, Kalamazoo, Mich.	Lupton's Sons Co., David, Philadelphia, Pa.	Cleveland Castings Pattern Co., Cleveland, Ohio
Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Heating Systems Corp., Joliet, Ill.	Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	Quincy Pattern Co., Quincy, Ill.
Dampers—Quadrants—Accessories.	Lakeside Co., Hermansville, Mich.	Williamson Heater Co., Cincinnati, Ohio	Vedder Pattern Works, Troy, N. Y.
Eller Mfg. Co., Canton, Ohio	A. H. Robinson Co., Massillon, Ohio	Heat Regulation Systems.	<i>(Continued on page 120)</i>
Howes Co., S. M., Boston, Mass.	Warm Air Furnace Fan Co., Sterling, Ill.	H. M. Sheer Co., Quincy, Ill.	
Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City	The, Cleveland, Ohio	Fox Furnace Co., Elyria, Ohio	
Parker-Kalon Corp., New York, N. Y.	Williamson Heater Co., Cincinnati, Ohio	Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.	
Damper Regulators.	Furnace Regulators.	Waterman-Waterbury Co., Minneapolis, Minn.	
H. M. Sheer Co., Quincy, Ill.	H. M. Sheer Co., Quincy, Ill.	Heaters—Combination Hot Water.	
		Alamo Heater Co., Chicago, Ill.	
		Standard Fdy. & Furnace Co., De Kalb, Ill.	

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IMPROVED REVOLVING

It runs in a self-lubricating bearing that is not affected by heat or cold. It is noiseless and produces an upward current of air. No down draft. It will satisfy and give you a good profit.

ASK YOUR NEAREST JOBBER

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229 to 237 ARCH STREET
WAREROOMS AND FACTORY, 100 TO 114 BREAD STREET
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Manufacturers of "Quaker City" line of Meters, Ends, Caps and Outlets

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STANDARD OF THE WORLD

THE BEST BRAKE FOR ALL PURPOSES: Most Durable, Easiest Operated, Low in Price. Made in All Lengths and to Bend All Gauges of Metal. Over 25,000 in use.

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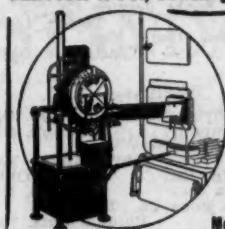
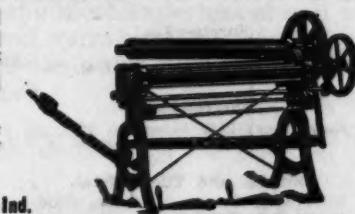
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This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and punches, all sizes, for hand or bell power.

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BERTSCH & CO., Cambridge City, Ind.



McILVAINE OIL BURNER

Listed by Underwriters

Adaptable to warm-air furnaces because the McILVAINE System of continuous flame insures no cracking or burning of fire pots, but produces even, dependable heat.

Not an Intermittent Burner
DEALERS: Write for information today
McILVAINE BURNER CORP., Dept. A, 747 Custer Ave., Evansville, Ill.

IF there is a tool or machine that you need and you don't know where to get it—

Write to the

Notes and Queries Dept.

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AMERICAN ARTISAN

TWO TAYLOR'S BRANDS

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First in the minds of sheet metal men is our famous HAND MADE roofing tin—the highest quality, longest lived roofing tin in the world, the old "TAYLOR'S" Old Style, known since 1905 by the new name.

Target and Arrow ROOFING TIN

Now we have gotten out a New Tin, but the best machine made plate ever produced, for those who want to pay less. This is known as

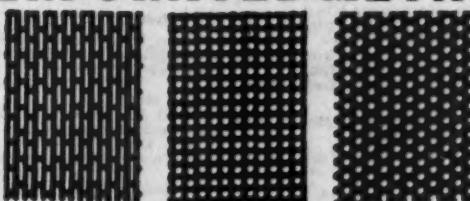
Taylor's Extra Coated 40 lb. Copper Bearing O. H.

Ample stocks carried by all distributors, Ask them for TAYLOR'S.

N. & G. TAYLOR COMPANY
Broad and Arch Streets Philadelphia

Headquarters for Good Roofing Tin Since 1810

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All Sizes and Shapes of Holes
in Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATING METAL

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NEW YORK OFFICE: 114 LIBERTY ST.

The NEW IMPROVED "STANDARD"

ROTABLE VENTILATOR

THIS favorite ventilator has been further improved to insure—

New made
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ARMCO IRON

Greater Durability
Quieter Operation
Greater Efficiency
Better Balance



"Standard" Ventilator and Chimney Cap—
Most Efficient Combination on the market.

STANDARD VENTILATOR CO.,

LEWISBURG, PA.

The New Cone-top Suspension, new Bronze Guide Bushings, and Cross Braced Skirt are the new features. Let us tell you in detail all about this better ventilator.

Write for special circular and prices today

BUYERS' DIRECTORY

(Continued from page 118)

Perforated Metals.

Harrington & King Perforating Co., Chicago, Ill.

Pipe and Fittings—Furnaces.

Chicago Furnace Supply Co., Chicago, Ill.

Eller Mfg. Co., Canton, Ohio

Henry Furnace & Fdy. Co., Clevesland, Ohio

Lamneck Co., W. E., Columbus, Ohio

Meyer & Bro. Co., F., Peoria, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Mueller Furnace Co., L. J., Milwaukee, Wis.

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Pipe and Fittings—Stove.

Meyer & Bro. Co., F., Peoria, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Pipe—Conductor.

Barnes Metal Products Co., Chicago, Ill.

Berger Bros. Co., Philadelphia, Pa.

Dieckmann Co., Ferdinand, Cincinnati, Ohio

Eller Mfg. Co., Canton, Ohio

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

New Jersey Zinc Sales Co., The, New York, N. Y.

Presses.

La Salle Machine Works, Chicago, Ill.

Pipe Covering.

Sail Mountain Co., Chicago, Ill.

Punches.

Bertsch & Co., Cambridge City, Ind.

Interstate Machinery Co., Chicago, Ill.

La Salle Machine Works, Chicago, Ill.

Ryerson & Son., Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Punches—Combination Bench and Hand.

Hyro Mfg. Co., New York, N. Y.

Punches—Hand.

Hyro Mfg. Co., New York, N. Y.

Putty—Stove.

Connors Paint Mfg. Co., Wm., Troy, N. Y.

Radiator Cabinets.

The Hart & Cooley Mfg. Co., New Britain, Conn.

Tuttle & Bailey Mfg. Co., Chicago, Ill.

Radiators—Shields.

Beh & Co., Inc., New York, N. Y.

Register Shields.

Beh & Co., Inc., New York, N. Y.

Registers—Warm Air.

Auer Register Co., Cleveland, Ohio

Eller Mfg. Co., Canton, Ohio

Forest City-Walworth Run Foundries Co., Cleveland, Ohio

Hart & Cooley Co., New Britain, Conn.

Henry Furnace & Fdy. Co., Cleveland, Ohio

Independent Register & Mfg. Co., Cleveland, Ohio

Ku-No Register Mfg. Co., St. Louis, Mo.

Lamneck & Co., W. E., Columbus, Ohio

Meyer & Bro. Co., F., Peoria, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Mueller Furnace Co., L. J., Milwaukee, Wis.

Rock Island Register Co., Rock Island, Ill.

Tuttle & Bailey Mfg. Co., Chicago, Ill.

Registers—Wood.

American Wood Register Co., Plymouth, Ind.

Auer Register Co., Cleveland, Ohio

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Regulators—Heat.

H. M. Sheer Co., Chicago, Ill.

Ridging.

Armeo Distributors Ass'n of America, Middletown, Ohio

Eller Mfg. Co., Canton, Ohio

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Rivets—Stove.

The Kirk-Latty Co., Cleveland, Ohio

Lamson & Sessions Co., Cleveland, Ohio

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Rods—Stove.

The Kirk-Latty Co., Cleveland, Ohio

Lamson & Sessions Co., Cleveland, Ohio

Rolls—Forming.

Bertsch & Co., Cambridge City, Ind.

Roofing Cement.

Connors Paint Mfg. Co., Wm., Troy, N. Y.

Roof—Flashing.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing—Iron and Steel.

Armeo Distributors Ass'n of America, Middletown, Ohio

Central Alloy Steel Corp., Massillon, Ohio

Eller Mfg. Co., Canton, Ohio

Inland Steel Co., Chicago, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Roofing—Tin.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing—Zinc.

New Jersey Zinc Sales Co., The, New York, N. Y.

Rubbish Burners.

Hart & Cooley Co., New Britain, Conn.

Schools—Sheet Metal Pattern Drafting.

St. Louis Technical Institute, St. Louis, Mo.

Schools—Warm Air Heating.

St. Louis Technical Institute, St. Louis, Mo.

Screws—Hardened Metallic Drive.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Parker-Kalon Corp., 200 Varick St., New York

Screws—Hardened Self-Tapping, Sheet Metal.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Parker-Kalon Corp., 200 Varick St., New York

Screens—Perforated Metal.

Harrington & King Perforating Co., Chicago, Ill.

Shears—Hand and Power.

Interstate Machinery Co., Chicago, Ill.

Marshalltown Mfg. Co., Marshalltown, Iowa

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Viking Shear Co., Erie, Pa.

Sheet Metal Nails.

Deniston Co., Not Inc., Chicago, Ill.

Sheet Metal Screws—Hardened, Self-Tapping.

Parker-Kalon Corp., 200 Varick St., New York

Sheets—Black and Galvanized.

Armeo Distributors Ass'n of America, Middletown, Ohio

Central Alloy Steel Corp., Massillon, Ohio

Eller Mfg. Co., Canton, Ohio

Inland Steel Co., Chicago, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Rockford Sheet Steel Co., Rockford, Ill.

Ryerson & Son, Inc., Jos. T., Ch'go., N. Y., St. L., Det., Cleve.

Taylor Co., N. & G., Philadelphia, Pa.

Sheets—Iron.

Armeo Distributors Ass'n of America, Middletown, Ohio

Central Alloy Steel Corp., Massillon, Ohio

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Sheets—Tin.

Taylor Co., N. & G., Philadelphia, Pa.

Sheets—Zinc.

New Jersey Zinc Sales Co., The, New York, N. Y.

Shingles and Tiles—Metal.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Milwaukee, Wis.

Sifters—Ash.

Diener Mfg. Co., G. W., Chicago, Ill.

Sky Lights.

Eller Mfg. Co., Canton, Ohio

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Slips.

Peck, Stow & Wilcox Co., Southington, Conn.

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Solder.

Eller Mfg. Co., Canton, Ohio

Kester Solder Co., Chicago, Ill.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Soldering Furnaces.

Burgess Soldering Furnace Co., Columbus, Ohio

Diener Mfg. Co., G. W., Chicago, Ill.

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Soldering Supplies.

Kester Solder Co., Chicago, Ill.

Specialties—Hardware.

Diener Mfg. Co., G. W., Chicago, Ill.

Stars—Hard Iron Cleaning.

Fanner Mfg. Co., Cleveland, Ohio

Statuary.

Geroek Bros. Mfg. Co., St. Louis, Mo.

Miller & Doing, Inc., Brooklyn, N. Y.

Steve Pipe Reducers.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Tinplate.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Taylor Co., N. & G., Philadelphia, Pa.

Tools—Tinsmith's.

Bertsch & Co., Cambridge City, Ind.

Dries & Krump Mfg. Co., Chicago, Ill.

Hyro Mfg. Co., New York, N. Y.

Interstate Machinery Co., Chicago, Ill.

Maplewood Machinery Co., Chicago, Ill.

Osborn Co., The J. M. & L. A., Cleveland, Ohio

Rockford Sheet Steel Co., Rockford, Ill.

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Viking Shear Co., Erie, Pa.

Torches.

Burgess Soldering Furnace Co., Columbus, Ohio

Diener Mfg. Co., G. W., Chicago, Ill.

Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

Trade Extension.

Sheet Steel Trade Extension Committee, Cleveland, Ohio

Trimmings—Stove.

Fanner Mfg. Co., Cleveland, Ohio

Vacuum Cleaner—Furnace.

Brillion Furnace Co., Brillion, Wis.

National Super Service Co., Toledo, Ohio

Williamson Heater Co., Cincinnati, Ohio

Ventilators.

Aeolus Dickinson Co., Chicago, Ill.

Arex Company, Chicago, Ill.

Berger Bros. Co., Philadelphia, Pa.

Eller Mfg. Co., Canton, Ohio

Kernchen Co., Chicago, Ill.

Lupton's Sons Co., David, Philadelphia, Pa.

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Standard Ventilator Co., Lewisburg, Pa.

Ventilators—Ceiling.

Hart & Cooley Co., New Britain, Conn.

Henry Furnace & Fdy. Co., Cleveland, Ohio

Windows—Steel.

Lupton's Sons Co., David, Philadelphia, Pa.

Wood Faces—Warm Air.

Auer Register Co., Cleveland, Ohio

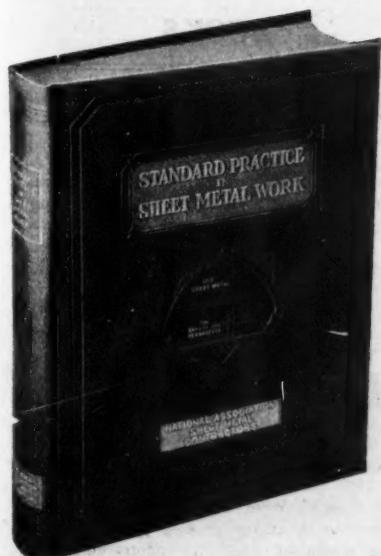
American Wood Register Co., Plymouth, Ind.

Eller Mfg. Co., Canton, Ohio

Milwaukee Corrugating Co., Mil., Ch'go., La Crosse, Kan. City

Zinc.

New Jersey Zinc Co., The, New York, N. Y.



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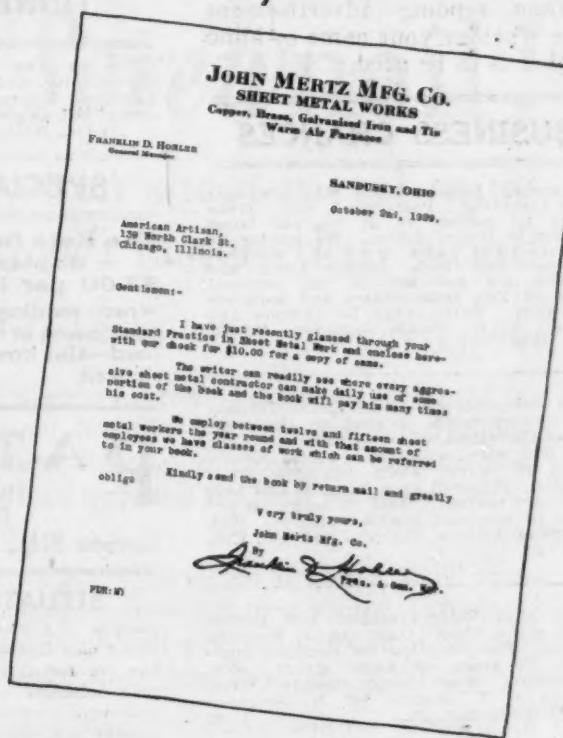
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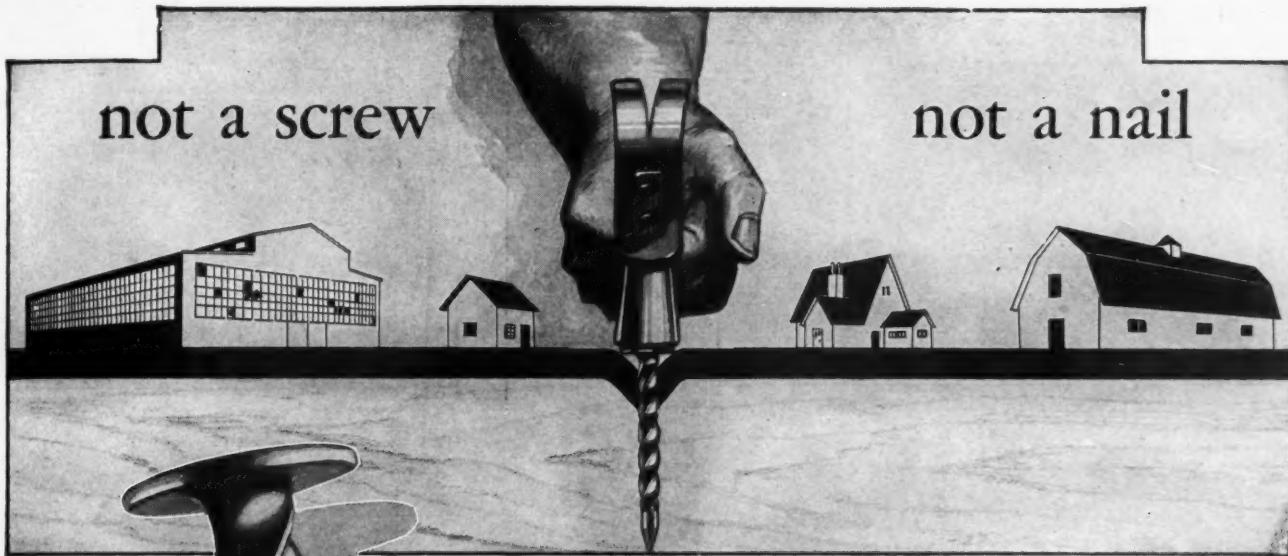
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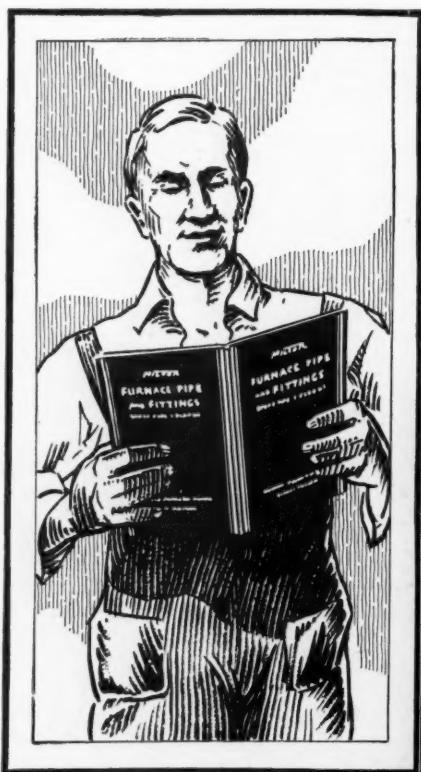
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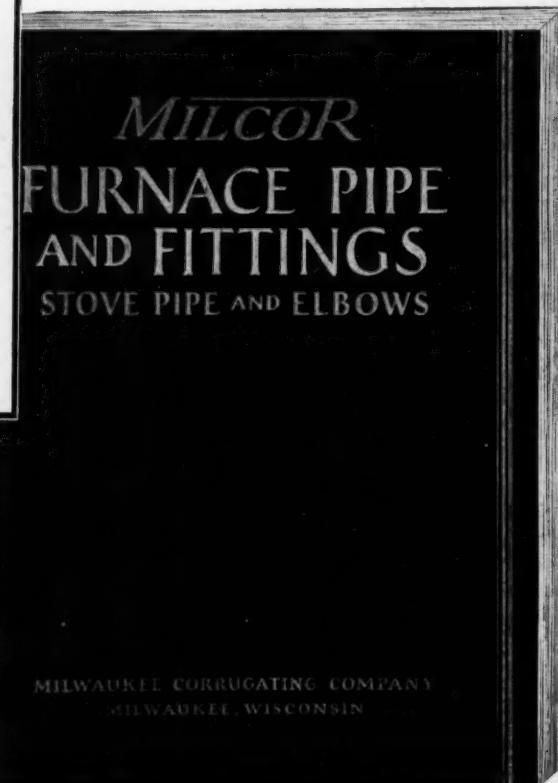
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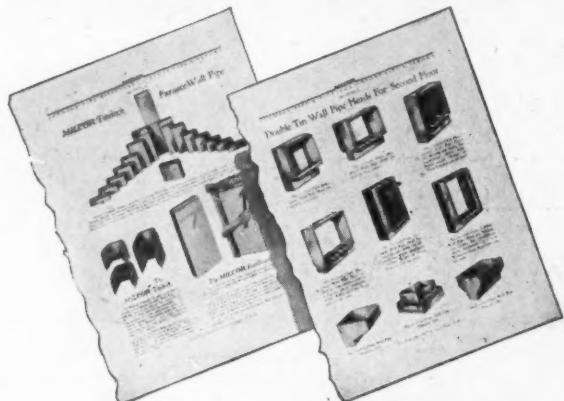
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